"CLINICAL STUDY OF SIDDHA DRUGS *VENPOOSANI NEI* (INTERNALLY) AND *SEERAGA THYLAM* (EXTERNALLY) IN THE TREATMENT OF *VIYAKOOLA UNMAATHAM* (DEPRESSION)"

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Dissertation Submitted to

THE TAMILNADU Dr. M.G.R MEDICAL UNIVERSITY, CHENNAI-32

In partial fulfilment of the requirements for the award of the degree of

DOCTOR OF MEDICINE (SIDDHA)

BRANCH III - DEPARTMENT OF SIRAPPU MARUTHUVAM

NATIONAL INSTITUTE OF SIDDHA

CHENNAI -47

OCTOBER - 2019

DECLARATION BY THE CANDIDATE

I hereby declare that this dissertation entitled **"CLINICAL STUDY OF SIDDHA DRUGS *VENPOOSANI NEI* (INTERNALLY) AND *SEERAGA THYLAM* (EXTERNALLY) IN THE TREATMENT OF *VIYAKOOLA UNMAATHAM* (DEPRESSION)** is a bonafide and genuine research work carried out by me under the guidance of **Dr.V.Mahalakshmi,M.D(s),Ph.D,** Associate professor**,** Department of Sirappu Maruthuvam, National Institute of Siddha, Chennai -47, and the dissertation has not formed the basis for the award of any Degree, Diploma, Fellowship or other similar title.

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BONAFIDE CERTIFICATE

Certified that I have gone through the dissertation submitted by **Dr.K.Prabakar, (Reg.No: 321613207)** a student of final year M.D(s), Branch-III, Department of Sirappu Maruthuvam, National Institute of Siddha, Chennai-47, and the dissertation work has been carried out by the individual only. This dissertation does not represent or reproduce the dissertation submitted and approved earlier.

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INTRODUCTION

Siddha system of medicine is a potent and unique indigenous system of medicine, which deals with the disease of human efficiently with the knowledge of both subtle and also the gross material body. Siddhi means knowledge or wisdom. The ultimate aim of siddha is to attained perfection or heavenly bliss.

‘மறுப்ப துடல்நோய் மருந்தென லாகும்

மறுப்ப துளநோய் மருந்தெனச்சாலும்

மறுப்ப தினிநோய் வார திருக்க

மறுப்பது சாவையு மருந்தென லாமே’

- திருமந்திரம்

As per Siddha system the human body is made up of three vital humors. Which are called as Vaatham, Pitham and Kabam respectively. In normal state the equilibrium of these three vital humor are the body as well as mind very healthy and stable. Vitiations of between these humors are the cause diseases in our body as well as mind.

Siddha system of medicine has mentioned a lot about Mana noigal like *Madha azivu, Madha noi, Kirigai, Unmadham*[1]. Siddhars also mentioned about the treatment aspects for Mana noigal. The symptoms of mana noigal include hallucinations, lack of interest in all activities, fatigue, depressed mood, insomnia, anxiety etc...In this condition the symptoms are comparably correlated with the Disorder *Viyagula Unmaatham* which is one of the six types of Unmaatham. In this disorder it includes the symptoms such as depressed mood, lack of concentration, crying or worrying without any reason, fear in contact with other persons, insomnia as per the literatures in Siddha.

Now a days in the hurry world almost every human being got the stress regularly and repeatedly. Unfortunately there is no time or no pathways to relieve the stress in a routine lifecycle leads to restlessness, Irritability, Lower tolerance level, Uncompromised behavior, Unable to accept and adjust certain situations, Ignore to share the love between their family members and friends. These are all conditions make the life very unsatisfactory and unhappier. So,It will probably reflects on the mental health.

Due to stress the relationship between various people such as Husband and wife,Parents and Children, Teacher and student, Doctor and Patient , Office manager and staffs are now haven`t any proper understanding, respect, obedience, genuineness and holistic nature. Even the

school students are also getting much stress from their school life and various additional coaching classes without adequate rest and mental refreshment. It is a alarming sign for us.

Hence, the repeated and prolonged stress is one of the major factor for getting depression. That the people can`t tolerate a simple failures in their life and can`t perform well against a crucial situations. It may spoil our society`s health and probably our nation`s wealth also.

So,I have the aim to treat and prevent depression with our native system of medicine with the scientific validation. I took the topic viyakula unmaatham significantly relavant to the Depression in modern diagnosis.

I have choosen the Internal medicine *Venpoosani kirutham* and External medicine *Seeraga thylam* with few scientific and siddha logical aspects.The venpoosani kirutham`s ingredients have some chemical constituents which are effective on the psychological issues very well.Kirutham (Nei) is one of the type of internal medicine which belongs the base as ghee.So,the medicine can cross the Blood Brain Barrier and acts on the brain appreciably. As per siddha literatures the seeraga thylam is very effective to normalize the elevated pitham which is the humor mostly responsible for mental illnesses.

Now a days, considerably more number of patients reporting daily for the treatment for Viyagula Unmaatham in Ayothidoss pandithar Hospital,National Institute of Siddha.Hence the author has choosen this disease with the trial drug "*Venpoosani kirutham"*(Internal) *"Seeraga Ennai"*(External).

AIM AND OBJECTIVES

AIM:

To Evaluate the efficacy of *VENPOOSANI KIRUTHAM (*internal) and *SEERAGA THAILAM* (external) in the treatment of *Viyakula Unmatham.*

OBJECTIVE:

- To make a detailed clinical evaluation of the disease by careful examination of etiology, symptoms, complication, treatment and Prognosis
- To study the Siddha and Modern aspects of *Viyakula unmatham* (Depression)
- To study the Siddha basic principles towards the efficacy of trial medicines.
- To carry out the Biochemical analysis of trial medicine of *VENPOOSANI KIRUTHAM*.

REVIEW OF LITRATURE

SIDDHA ASPECT

Introduction

In Siddha system, all psychiatric diseases are come under the *kirigai noigal. Kirigai maruthuvam,* the psychiatry in Siddha system of medicine is propounded by several Siddhars of whom the most renowned are *AGATHIYAR, YUGIMUNIVAR* and *THERAIYAR.* In Siddha system, the physiology of human body is dealt in 96 *thatthuvangal* (philosophy). Of the 96 *thatthuvam*, *Manam* (mind), *Buththi* (wisdom, decision making), Chitham(determination), *Agangara*m (accomplishment) are the responsible for the mental well-being. *Agangaram* is the innate character of *manam*. *Manam*(mind) is responsible for thinking, reasoning, planning and self-realization.

The mind and physique are inseparable and inter dependable. *Manam* is both receptive and executive. In-appropriate food, seasonal variations, somatic diseases, and drug abuse are some of the factors that influence the mind. This stimulates the three humors *vali, azhal* and *iyam,* especially deranges *vali* or *azhal* or often the predominance of *azhal* humor over the other two, thereby manifest mana noigal (mental disorders). *Agathiyar maanidar kirigai nool* and *yugi Sinthamani-800* are noteworthy psychiatric literature in Siddha system. They classified the clinical variety of mental illness, based on symptomatology. It is more probably correlates with modern psychiatric illnesses like depression, schizophrenia, mania, convulsive disorders, neurotic illness, drug dependence and toxic psychosis etc.

UNMATHAM (DEFECTED NORMAL MENTAL STATE):

Synonyms: *veri noi, pithu noi, paithiya noi ,pitha noi, unmatham*.

Definiton-

It is a psychic disorder, develops as changed normal mental state due to the vitiation of three humors viz *vatham, pitham* and *kapham*. Changed mental state, loss of intelligence, articulation defect, dancing, singing, continuous working mania, quarrelling and beating.

Noi varum vazhi[2]:

The disease occurs due to destruction physical and mental factors of the body. The reasons for this are,

- Increased intake of food,
- Excessive starvation,
- Drug abuse,
- Increased desires,
- Frighten,
- Frequent agitation.

Hence the disease can occur in association with vadha disease like *pakkavatham, valipu noi*, its also seen in persons those who were undergoing ailments for long time and also in postpartum ladies whose health is severely affected.

The disease can also occur due to wrong practice of yogam during the *thuriya avaththai* state. Since this disease occurs due to deranged *azhal kutram(piththam*),which is also called as *paithiya noi*. The persons whose mental state is disturbed and who keeps on blabbering whatever he likes they are commonly called as *paithiyam.*

AETIOLOGY:

In the text book of *yugi maa munivar vaiththiya sinthamani 800,*

"ÁÕ×§Á ÒÄ¢ôÒ¨Èô ÒÅ÷ôÒ Á¢ï°ø

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¦¿Õ×§Á ¦¿ÕôÒ¦ÅÂ¢ø Ṡ¸¡Àó ¾ýÉ¢ø

¿¢ò¾¢¨Ã¾¡ ¿¢øÄ¡Áø Å¢Æ¢ò¾¢Õò¾ø

«Õ×§Á Âì¸¢É¢Â¢ü ¦À¡°¢ì¸¡ Ðñ¼

Ä¾¢¸Á¡öô ¦Àñ§À¡¸ ÁÛÀ Å¢ò¾ø

¿Õ×§Á ¿¡À¢ìÌ §Á§Ä ¿¢ýÚ

½¡Ê§Â ¸ñ¼Áð¼¡ Â¢ÕìÌõ À¡§Ã”

Vihara Pitham

“¦°¡øÄ§Å ÐÂ¢¦Ä¡Æ¢óÐ ¸°óÐ Å¡¨Âò

ÐôÒÃÅ¡öô ÀÄ§ÀîÍõ Å¢ÕõÀ¢ ¼¡Ð

¸øÄ§Å ¸ñ °¢ÅóÐ Óñ¼¡í

ÁøÄ§Å Å¡ó¾¢¦Â¡Î ÁÂì¸ Á¡Ì

ÁÉÁÕ¸ Ä¡¸¢§Â Å¡ö¿£ åÚõ

ÀøÄ§Å ÀðÉ¢¾¡ý Á¢¸ Å¢ÕìÌõ

À¡ÃÁ¡õ Å¢¸¡ÃÀ¢ò¾ô ÀñÀ ¾¡§Á”[3]

- Sleeplessness,
- Bitter taste in mouth,
- Hatred ,
- Redness of eyes,
- Pallor of body with body pain,
- Vomiting,
- Giddiness,
- Lack of vigilance,
- Dribbling of saliva.

Unmaatha pitham

“Å¢ÅÃÁ¡ö §ÁÉ¢¦ÂÄ¡ Á¢ÎìÌñ ¼¡Ì

Á¢ì¸¡É ¾£ÀÉó¾¡ý ¦Áò¾ Å¡Ìó

¾ÀÃÁ¡öò ¾¨Ä¾¡Ûí ¸ÉòÐì ¸¡Ïó

¾¡¢ìÌ§Á¡ ¡¢¼ó¾ýÉ¢ø Á¢¸ Å¢ÕìÌõ

¯ÀÃÁ¡ ¦Â¡ÕÅÕ¼ý §À°¢ ¼¡Á

¾¢ÀÃÁ¡ö Å¡ö¿£÷¾¡ý ÅÊòÐ ¿¢üìï

°¢ò¾ÁÐ ¸ÄíÌÓý Á¡¾ Á¡§Á”[4]

- Increased anger,
- Quarrelling,
- Flatulence,
- Lack of intelligence,
- Redness of eyes,
- Sleeplessness,
- Weight gaining.

TYPES OF UNMATHAM[5]:

Unmatham has classified into 6 types,

- ***Vatha Unmatham***:

Affected mental state, articulation defect, dancing, singing, quarrelling and beating are the general symptoms of vatha unmatham.

- ***Pitha unmatham***:

Frightening others, abnormal body movements, interested in cold items.

- ***Kapha unmatham:***

Insomnia, frightening others, sexual indulgence,self-centeredness, possessiveness.

- ***Mukkuttra unmatham***:

The mixed signs and symptoms of *vatham, pitham* and *kapham* unmatham is called mukkuttra unmatham.

- ***Viyagula unmatham****:*

Anxiety and depression due to bereavement, sorrow and grief, paleness, loss of wealth and weeping are the symptoms of this disease.

- ***Nanju unmatham*****:**

Toxicity of metals and others, which affects the brain, drug abuse, tiredness of extremities, sensory organs, blackish discoloration of the body, general debility, weakness of the body and perplexity are the symptoms of these diseases.

Murkurigal (EARLY SYMPTOMS) :-

- ➢ Reduced mental function
- ➢ Excessive anger.
- ➢ Mood swings.
- ➢ Low pitched or high-pitched voice.
- ➢ Lethargy.
- ➢ Blabbering and whispering always.
- ➢ Abnormal behaviour.

COMMON SYMPTOMS:

- Mental instability,
- Restlessness,
- Loss of control,
- Confined thoughts,
- Speaking loudly,
- Sleeplessness,
- Blabbering,
- Slurred speech,
- Lack of interest,
- Loss of strength.

TREATMENT:

"நோய் நாடி நோய்முதநாடிய துதணிக்கும்
வாய்நாடி வாய்ப்பச் செயல்"

-திருவள்ளுவர்.

Thiruvalluvar says in "*Thirukkural*" about physician‟s duty to study the disease, Study the cause, seek subsiding ways and do what is proper and effective.

"உற்றவன் தீர்ப்பான் மருந்துழைச் செல்வானென்
றப்பனாற் கூற்றே மருந்து"

-திருவள்ளுவர்.

In Siddha system of medicine, the main aim of the treatment is to cure Udalpini and Manapini. Treatment is not only for treating disease but also for prevention and rejuvenation. In siddha system of medicine line of treatment are as follows,

- *Neekam* (Treatment)
- *Niraivu* (Rejuvenation)
- *Kappu* (Prevention)

1.*Neekam* (Treatment):

- விரேசனம்
- உள்மருந்து

- வெளிமருந்து
- பத்தியம்

➢ *Viresanam*:

Siddha system of medicine is based on three humors and hence the treatment is mainly aimed to bring the three humors to equilibrium state and thereby restoring the physiological condition of the seven thathus.

➢ Internal medicine:

The medicines which are taken internally are called as internal medicines. These are classified into 32 types, e.g. surasam, saaru, pittu, vadagam and chooranam, thylam

➢ External medicine:

The medicines which are applied externally are called as external medicines. These also classified into 32 types, e.g.kattu, patru, otradam, vedhu and thokkanam.

➢ *Anubanam*(vehicle*):*

"அனுபானத்தாலே யவிழ்தம் பலிக்கும்
இனிதான சுக்குஇஞ்சி-பினிமுதுகால்
கோமயம்பால் முலைப்பால் கோ நெய்தேன் வெற்றிலைனீர்
ஆமிதையா ராய்ந்து செய்யலாம்"

-தேரையர் வெண்பா

➢ *Pathiyam* (Dietary Regimen):

In mild conditions of the disease, salt and tamarind can be taken in little quantities. When the condition is severe, tamarind should be avoided and salt must be consumed after frying.

"பத்தியத்தினானே பலனுண்டாகும் மருந்து
பத்தியங்கள் போனால்பலன் போதும் பதியத்தில்
பத்தியமே வெற்றி தரும் பண்டிதர்க்கு ஆதலினால்

- தேரையர்,

Substances used for neutralizing the three humors are:

“ஒன்றிய வாதபித்த கபமிவை யுயராவண்ணம்
நன்றது கறிகளெல்லாம் நாளுமே சமைப்பராய்ந்தோர்
தின்றிடு மிளகு மஞ்சள் சீரகமுயர்ந்த காயம்
வென்றிகொள் சுக்கோடெலம் வெந்தயமுள்ளி சேர்த்தே”

- பதார்த்த குண சிந்தாமணி

The patients are well motivated. The nature and course of the disease is explained to them, Life-style modification advised.

3.*Kappu* (Prevention):

Ideal measures mentioned in the Siddha classical text Pathartha guna chinthamani for healthy living as below,

“¾¢ñ½Á¢ÃñÎû§Ç °¢ì¸ Å¼ì¸¡Áü
¦Àñ½¢ýÀ¡ ¦Ä¡ý¨Èô ¦ÀÕì¸¡Áø - ¯ñÏí¸¡ø
¿£÷ÍÕì¸¢ §Á¡÷¦ÀÕì¸¢ ¦¿öÔÕì¸¢ ÔñÀÅ÷ ¾õ
§ÀÕ¨Ãì¸¢ü §À¡§Á À¢½¢”[6]

“¬Ú¾¢í¸ð ¦¸¡Õ¾¼¨Å ÅÁÉÁÕó ¾Â¢ø§Å¡õ
«¼÷¿¡ýÌ Á¾¢ì¦¸¡Õ¸¡ü §À¾¢Ô¨È Ñ¸÷§Å¡õ
§¾ÚÁ¾¢ ¦Â¡ýÈ¨Ãì§¸¡÷ ¾Ã¿°¢Âõ ¦ÀÕ§Å¡õ
¾¢í¸Ç¨Ãì ¸¢ÃñÎ¾Ãï °ÅÃÅ¢Õô ÒÚ§Å¡õ
Å£Ú°Ð÷ ¿¡ð¦¸¡Õ¸¡ø ¦¿öÓØì¨¸ò ¾Å¢§Ã¡õ
Å¢Æ¢¸Ùì¸ï °ÉãýÚ ¿¡ð¦¸¡Õ¸¡Ä¢Î§Å¡õ
¿¡Ú¸ó¾õ ÒðÀÁ¢¨Å ¿Î¿¢°¢Â¢ý Ó¸§Ã¡õ

¿ÁÉ¡÷ì¸¢í §¸Ð¸¨Å ¿¡Á¢ÕìÌ Á¢¼ò§¾″[7]

The disease occurs due to activities that increase *azhal* and consuming food that increases azhal, so in order to correct the diseases we have to normalize the deranged *azhal* and there by the other factors.

- Ghee based medicine, milk to be administered initially and take purgation and therapeutic vomiting may be advised.
- Medicine which improves the strength of the body.
- *Yogam* is the important *kayakalpam* to treat psychiatric diseases

MODERN ASPECT

INTRODUCTION

Depression is a common mental disorder that presents with depressed mood, loss of interest or pleasure, feelings of guilt or low self-esteem, disturbed sleep or appetite, low energy, and poor concentration. When these problems last for a short period of time, it may be called a passing case of "the blues." But it's likely to be a depressive disorder when they last for more than two weeks and interfere with regular daily activities.

Depressive disorders, also known as mood disorders, include three main types: major depression, persistent depressive disorder, and bipolar disorder. Depressive disorders can affect people of any age, including children, teenagers, adults, and older adults.

CAUSES

Depression varies person to person and occurs due to one or more reasons. Depression is most likely due to a combination of genetic, biological, environmental, and psychological factors. Occasionally it may appear for no obvious reason.

Life events

In many cases, the first time someone becomes depressed, it has been triggered by an unwelcome or traumatic event, such as being sacked, divorced, or physically or sexually assaulted.

Loss

Often events or experiences that triggers depression mainly associated with loss of something precious in life. It could be following the actual death of someone close, a major life change (such as moving house or changing jobs), or simply moving from one phase of life into another, e.g. as you reach retirement, children leave home, or you come to realize that you may never have a family of your own.

It's not just the negative experience that causes the depression, but how we deal with it. If the feelings provoked are not expressed or explored at the time, they fester and contribute towards depression.

Anger

In some cases, some people call depression 'frozen anger'. You may have experienced something which left you feeling angry and helpless, and if you were unable to express your feelings at the time – perhaps because you were a child, or your feelings were unacceptable to others – the anger becomes internalized and is expressed as depression.

Childhood experiences

Traumatic event in childhood, or were abused physically or emotionally, or were not helped to learn good coping skills as you grew up, this can leave you less able to cope with difficulties as an adult.

Women who have been the victim of physical, emotional, or sexual abuse, either as a child or perpetrated by a romantic partner are vulnerable to developing a depressive disorder as well.

Physical conditions

All medical illnesses and their treatment can act as nonspecific stressors, which may lead to mood disorders in predisposed individuals. However, sometimes certain medical conditions are believed to play a more direct role in causing the mood disorder (e.g. *brain disease, certain infections, including HIV, and endocrine disorders*).

The following conditions may cause depression, but are sometimes overlooked because of the focus on their physical symptoms:

- Conditions affecting the brain and nervous system
- Hormonal problems, especially thyroid and parathyroid problems; symptoms relating to the menstrual cycle or the menopause
- Low blood sugar
- Sleep problems.

Different neuropsychiatric illnesses seem to be associated with an overabundance or a lack of some of these neurochemicals in certain parts of the brain. For example, a lack of dopamine at the base of the brain causes Parkinson's disease. Alzheimer's dementia seems to be related to lower acetylcholine levels in the brain. The addictive disorders are under the influence of the neurochemical dopamine. That is to say, drugs and alcohol work by releasing dopamine in the brain. The dopamine causes euphoria, which is a pleasant sensation. Individuals with anxiety, attention deficit hyperactivity disorder (ADHD), substance abuse, and developmental disabilities may be more vulnerable to developing depression.

Side effects of medication

Certain medications used for a variety of medical conditions are more likely than others to cause depression as a side effect, for example, many people become depressed after a heart attack, and this may be more likely if they are taking beta blocker medicines as part of their treatment. Specifically, some medications that are used to treat high blood pressure, cancer, seizures, extreme pain, and to achieve contraception can result in depression. Even some psychiatric medications like some sleep aids and medications to treat alcoholism and anxiety can contribute to the development of depression.

Diet

Poor diet and general lack of fitness can both contribute to depression.

In addition, anecdotal evidence suggests that occasionally people become very depressed in response to some specific foods. Such a reaction is very individual, and people are often not aware of the particular food substance or drink that is causing the problem. But if you suddenly feel depressed for no apparent reason, it may be worth considering whether you have eaten or drunk something new, and whether this might have caused your sudden change of mood. If this is the cause, your mood should lift very quickly, so long as you don’t consume any more of the particular item.

Street drugs and alcohol

Alcohol is a depressant and will tend to make you feel worse overall. Some street drugs can also depress, especially if used repeatedly. Repeated use of drugs or alcohol, however, desensitizes the dopamine system, which means that the system gets used to the drugs and alcohol. Therefore, a person needs more drugs or alcohol to achieve the same high feeling. Thus, the addicted person takes more substance but feels less and less high and increasingly depressed.

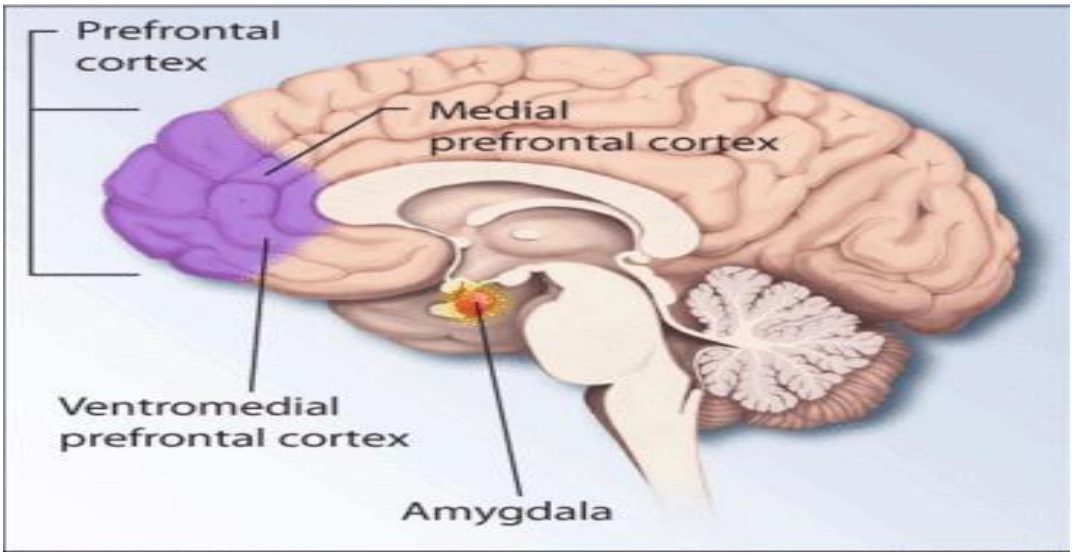
Genetics

Although no specific genes for depression, have been identified, it does seem to run in families to some extent, and some of us are more prone to depression than others. This could also be because we learn behavior and ways of responding from our ancestors, as well as inheriting our genes from them.

The effect of maternal-fetal stress on depression is currently an exciting area of research. It seems that maternal stress during pregnancy can increase the chance that the child will be prone to depression as an adult, particularly if there is a genetic vulnerability. It is thought that the mother's circulating stress hormones can influence the development of the fetus' brain during pregnancy. This altered fetal brain development occurs in ways that predispose the child to the risk of depression as an adult.

Major depression also seems to occur in generation after generation in some families, although not as strongly as in bipolar I or II. Indeed, major depression can also occur in people who have no family history of depression.

Chemical changes in the brain:

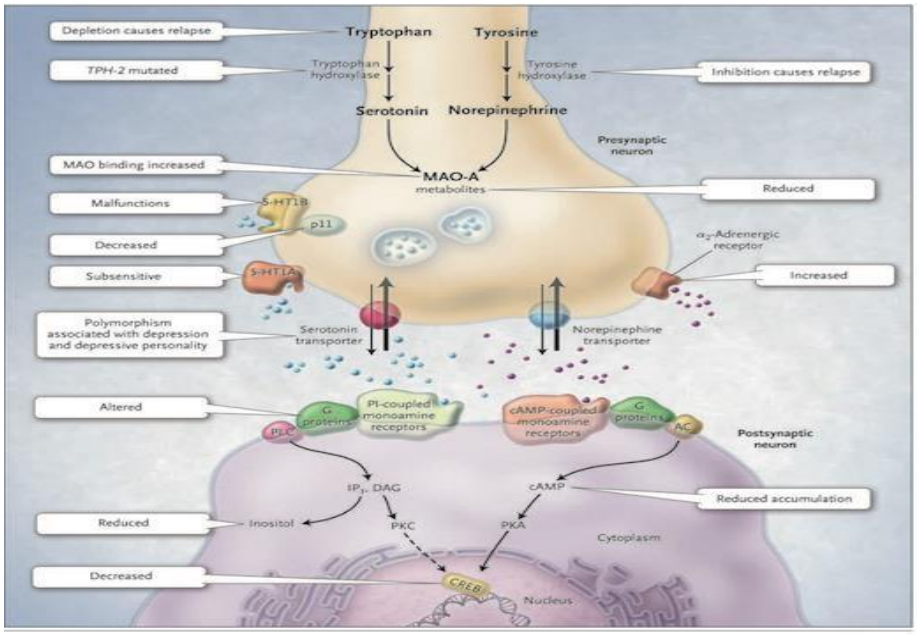


(Medial prefrontal affected in depressive mood, which is to planning cognitive behaviour, personality expression, decision making and moderating social behaviour)

Brain imaging technologies, such as magnetic resonance imaging (MRI), have shown that the parts of the brain involved in mood, thinking, sleep, appetite, and behavior of people who have depression function differently than those of people without it.

Because antidepressants work by changing brain chemistry, many people have assumed that depression must be caused by changes in brain chemistry that are then 'corrected' by the drugs. Some psychiatrists may explain you that you have a 'chemical imbalance' and need medication to correct it. But the evidence for this, apart from the effects of medication, is very weak, and if changes to brain chemistry occur, we don't know whether these are the result of the depression or its cause. Although there are physical tests which are occasionally used in research on depression, they are not very accurate or consistent, and there are none that are done routinely to help make a diagnosis.

Monoamine pathways, particularly those involving noradrenaline and 5-hydroxytryptamine (5- HT), innervate cortical and subcortical brain regions thought to be involved in mood regulation. Hypothesis suggests that depressive disorder is due to an abnormality in a monoamine neurotransmitter system at one or more sites in the brain. Three monoamine transmitters have been implicated— serotonin (5- HT), noradrenaline, and dopamine. The latter two neurotransmitters are called *catecholamines*. Biochemical investigations in depressed patients have focused on the *monoamine neurotransmitters* because monoamine pathways appear to play an important role in the actions of effective antidepressant drugs.



Finally, the depressive disorders appear to be associated with altered brain serotonin and norepinephrine systems. Both of these neurochemicals may be lower in depressed people. Please note that depression is "associated with" instead of "caused by" abnormalities of these neurochemicals because we really don't know whether low levels of neurochemicals in the brain cause depression or whether depression causes low levels of neurochemicals in the brain.

DEPRESSION SYMPTOMS:

Depression symptoms include:

- Feelings of sadness or unhappiness
- Irritability or frustration, even over small matters
- Loss of interest or pleasure in normal activities
- Reduced sex drive
- Insomnia or excessive sleeping
- Changes in appetite — depression often causes decreased appetite and weight loss
- In some people it causes increased cravings for food and weight gain
- Agitation or restlessness — for example, pacing, hand-wringing or an inability to sit still
- Irritability or angry outbursts
- Slow thinking, speaking or body movements
- Indecisiveness, distractibility and decreased concentration
- Fatigue, tiredness and loss of energy — even small tasks may seem to require a lot of effort
- Feelings of worthlessness or guilt, fixating on past failures or blaming yourself when things aren't going right
- Trouble thinking, concentrating, making decisions and remembering things
- Frequent thoughts of death, dying or suicide
- Crying spells for no apparent reason
- Unexplained physical problems, such as back pain or headaches

Depression symptoms in children and adolescent:

Common symptoms of depression can be a little different in children and teens than they are in adults.

- In younger children, symptoms of depression may include sadness, irritability, hopelessness and worry.
- Symptoms in adolescents may include anxiety, anger and avoidance of social interaction.
- Changes in thinking and sleep are common signs of depression in adolescents and adults but are not as common in younger children.
- In children and teens, depression often occurs along with behavior problems and other mental health conditions, such as anxiety or attention-deficit/hyperactivity disorder (ADHD).
- Schoolwork may suffer in children who are depressed.

Depression symptoms in older adults:

Depression is not a normal part of growing older, and most seniors feel satisfied with their lives. However, depression can and does occur in older adults. Unfortunately, it often goes undiagnosed and untreated. Many adults with depression feel reluctant to seek help when they're feeling down.

- In older adults, depression may go undiagnosed because symptoms — for example, fatigue, loss of appetite, sleep problems or loss of interest in sex — may seem to be caused by other illnesses.
- Older adults with depression may have less obvious symptoms. They may feel dissatisfied with life in general, bored, helpless or worthless. They may always want to stay at home, rather than going out to socialize or doing new things.
- Suicidal thinking or feelings in older adults is a sign of serious depression that should never be taken lightly, especially in men. Of all people with depression, older adult men are at the highest risk of suicide.

SIGNS AND SYMPTOMS OF DEPRESSIVE DISORDER:

1. A depressive disorder is a syndrome (group of symptoms) that reflects a sad and/or irritable mood exceeding normal sadness or grief. More specifically, the sadness of depression is characterized by a greater intensity and duration and by more severe symptoms and functional disabilities than is normal.

2. Depressive signs and symptoms are characterized not only by negative thoughts, moods, and behaviors but also by specific changes in bodily functions (for example, crying spells, body aches, low energy or libido, as well as problems with eating, weight, or sleeping). The functional changes of clinical depression are often called neurovegetative signs. This means that the nervous system changes in the brain cause many physical symptoms that result in diminished participation and a decreased or increased activity level.

3. Certain people with depressive disorder, especially bipolar depression (manic depression), seem to have an inherited vulnerability to this condition.

4. Depressive disorders are a huge public-health problem, due to its affecting millions of people. About 10% of adults, up to 8% of teens and 2% of preteen children experience some kind of depressive disorder.

The statistics on the costs due to depression in the United States include huge amounts of direct costs, which are for treatment, and indirect costs, such as lost productivity and absenteeism from work or school.

- Adolescents who suffer from depression are at risk for developing and maintaining obesity.

- In a major medical study, depression caused significant problems in the functioning of those affected more often than did arthritis, hypertension, chronic lung disease, and diabetes, and in some ways as often as coronary artery disease.
- Depression can increase the risks for developing coronary artery disease, HIV, asthma, and many other medical illnesses. Other complications of depression include its tendency to increase the morbidity (illness/negative health effects) and mortality (death) from these and many other medical conditions.
- Depression can coexist with virtually every other mental health illness, aggravating the status of those who suffer the combination of both depression and the other mental illness.
- Depression in the elderly tends to be chronic, has a low rate of recovery, and is often undertreated. This is of particular concern given that elderly men, particularly elderly white men have the highest suicide rate.

5. Depression is usually first identified in a primary-care setting, not in a mental-health practitioner's office. Moreover, it often assumes various disguises, which causes depression to be frequently not diagnosed.

6. In spite of clear research evidence and clinical guidelines regarding therapy, depression is often undertreated. Hopefully, this situation can change for the better.

7. For full recovery from a mood disorder, regardless of whether there is a precipitating factor or it seems to come out of the blue, treatment with medication and/or electroconvulsive therapy (ECT) and psychotherapy are necessary.

TYPES OF DEPRESSION:

Depressive disorders are mood disorders that come in different forms, just as do other illnesses, such as heart disease and diabetes. Three of the most common types of depressive disorders are discussed below. However, remember that within each of these types, there are variations in the number, timing, severity, and persistence of symptoms. There are also differences in how individuals experience depression based on age.

Major depression:

Major depression is characterized by a combination of symptoms that last for at least two weeks in a row, including sad and/or irritable mood (see symptom list), that interfere with the ability to work, sleep, eat, and enjoy once pleasurable activities. Difficulties in sleeping or

eating can take the form of excessive or insufficient of either behavior. Disabling episodes of depression can occur once, twice, or several times in a lifetime.

Dysthymia:

Dysthymia is a less severe but usually more long-lasting type of depression compared to major depression. It involves long-term (chronic) symptoms that do not disable but yet prevent the affected person from functioning at "full steam" or from feeling good. Sometimes, people with dysthymia also experience episodes of major depression. This combination of the two types of depression is referred to as double-depression.

Bipolar disorder (manic depression):

Another type of depression is bipolar disorder, which encompasses a group of mood disorders that were formerly called manic-depressive illness or manic depression. These conditions show a particular pattern of inheritance. Not nearly as common as the other types of depressive disorders, bipolar disorders involve cycles of mood that include at least one episode of mania or hypomania and may include episodes of depression as well. Bipolar disorders are often chronic and recurring. Sometimes, the mood switches are dramatic and rapid, but most often they are gradual. When in the depressed cycle, the person can experience any or all of the symptoms of a depressive disorder. When in the manic cycle, any or all of the symptoms listed later in this article under mania may be experienced. Mania often affects thinking, judgment, and social behavior in ways that cause serious problems and embarrassment. For example, indiscriminate or otherwise unsafe sexual practices or unwise business or financial decisions may be made when an individual is in a manic phase. A significant variant of the bipolar disorders is designated as bipolar II disorder. (The usual form of bipolar disorder is referred to as bipolar I disorder.) Bipolar II disorder is a syndrome in which the affected person has repeated depressive episodes punctuated by what is called hypomania (mini-highs). These euphoric states in bipolar II do not fully meet the criteria for the complete manic episodes that occur in bipolar I.

Postpartum depression:

Postpartum depression (PPD) is a condition that describes a range of physical and emotional changes that many mothers can have after having a baby. PPD can be treated with medication and counseling. Talk with your health-care practitioner right away if you think you have PPD. There are three types of PPD women can have after giving birth

1. The so-called "baby blues" happen in many women in the days right after childbirth. A new mother can have sudden mood swings, such as feeling very happy and then feeling very sad or angry. She may cry for no reason and can feel impatient, irritable, restless, anxious, lonely, and sad. The baby blues may last only a few hours or as long as one to two weeks after delivery. The baby blues do not always require treatment from a health-care provider. Often, joining a support group of new moms or talking with other moms helps.

2. Postpartum depression (PPD) can happen a few days or even months after childbirth. PPD can happen after the birth of any child, not just the first child. A woman can have feelings similar to the baby blues -- sadness, despair, anxiety, irritability -- but she feels them much more strongly than she would with the baby blues. PPD often keeps a woman from doing the things she needs to do every day. When a woman's ability to function is affected, this is a sure sign that she needs to see her healthcare provider right away. If a woman does not get treatment for PPD, symptoms can get worse and last for as long as one year. While PPD is a serious condition, it can be treated with medication and counseling.

3. Postpartum psychosis is a very serious mental illness that can affect new mothers. This illness can happen quickly, often within the first three months after childbirth. Women can experience psychotic depression, in that the depression causes them to lose touch with reality, have auditory hallucinations (hearing things that aren't actually happening, like a person talking), and delusions (seeing things differently from what they are in reality). Visual hallucinations (seeing things that aren't there) are less common. Other symptoms include insomnia (not being able to sleep), feeling agitated (unsettled) and angry, strange feelings and behaviors, as well as having suicidal or homicidal thoughts. Women who have postpartum psychosis need treatment right away and almost always need medication. Sometimes women are put into the hospital because they are at risk for hurting themselves or someone else, including their baby.

DIAGNOSIS OF DEPRESSION:

People who wonder if they should talk to their health professional about whether or not they have depression may consider taking a depression self-test, which asks questions about depressive symptoms. In thinking about when to seek medical advice about depression, the sufferer can benefit from considering if the sadness lasts more than two weeks or so or if the way they are feeling significantly interferes with their ability to function at home, school, or work and in their relationships with others. The first step to obtaining appropriate treatment is

accurate diagnosis, which requires a complete physical and psychological evaluation to determine whether the person may have a depressive illness, and if so, what type. As previously mentioned, certain medications, as well as some medical conditions, can cause symptoms of depression. Therefore, the examining physician should rule out (exclude) these possibilities through an interview, physical examination, and laboratory tests. Many primary-care doctors use screening tools, symptoms tests, for depression, which are usually questionnaires that help identify people who have symptoms of depression and may need to receive a full mental-health evaluation.

The doctor usually asks about alcohol and drug use and whether the patient has had thoughts about death or suicide. Further, the history often includes questions about whether other family members have had a depressive illness, and if treated, what treatments they received and which were effective.

A diagnostic evaluation also includes a mental status examination to determine if the patient's speech, thought pattern, or memory has been affected, as often happens in the case of a depressive or manic-depressive illness. As of today, there is no laboratory test, blood test, or Xray that can diagnose a mental disorder. Even the powerful CT, MRI, SPECT, and PET scans, which can help diagnose other neurological disorders such as stroke or brain tumors, cannot detect the subtle and complex brain changes in psychiatric illness. However, these techniques are currently useful in research on mental health and perhaps in the future they will be useful for diagnosis as well.

RISK FACTORS

Risk factors of depression	
Lack of social support	Social support serves as a protective factor against depression. People who are isolated and have few friends or family members to turn to in times of stress are more likely to develop depression.
Recent stressful life experience	When people are going through stressful experiences that overwhelm their coping skills, depression often results.

Previous history of Depression	If you've had an episode of major depression before, you are at increased risk of having another episode. The probability of having a recurrence increases with each major depressive episode.
Family history of Depression	If depression runs in your family, your risk for depression is higher. Your risk is particularly high if one of your close relatives, such as parent or sibling, had depression
Lower socioeconomic status	Research has shown that low socioeconomic status is associated with increased rates of depression. People with lower levels of income, education, and occupational status face many obstacles and stressors that likely contribute to this risk.
Underlying emotional or personality Disorder	People with pervasive emotional difficulties or personality disorders are vulnerable to depression.
Chronic medical condition	Ongoing medical problems or chronic pain can lead to depression
Female sex	Women are twice as likely to experience depression as men.
Advanced age	People over the age of 65 are more vulnerable to depression.

COMPLICATIONS:

People who are depressed are more likely to use alcohol or illegal substances.

Complications of depression also include:

- Increased risk of physical health problems
- Suicide

Thoughts of Death or Suicide:

People suffering from depression often show distorted thinking. Everything looks bleak to them, and they hold extremely negative views about themselves, their situation, and the future. Trapped in their pessimism, they brood/obsess over their problems and blow them out of proportion. Feeling hopeless and helpless, they may even start to see suicide as their only way out.

Suicidal thoughts are a symptom of severe depression and must always be taken seriously. If someone you know is threatening suicide or talking of wanting to hurt him/herself, seek professional help right away.

PROGNOSTIC FACTORS:

The best predictor of the future course is the history of *previous episodes*. Not surprisingly, the risk of recurrence is much higher in individuals with a history of *several previous episodes*. Other factors that predict a higher risk of future episodes include the following:

- Incomplete symptomatic remission
- Early age of onset
- Poor social support
- Poor physical health
- Substance abuse
- Co morbid personality disorder

The various risk factors, particularly previous pattern of recurrence and the extent of current remission, have important implications for the use of longer- term maintenance treatments. In many patients, depressive disorders are best conceptualized as chronic relapsing conditions that require an integrated longterm treatment approach.

DIFFERENTIAL DIAGNOSIS OF DEPRESSIVE DISORDERS:

Depressive disorders have to be distinguished from the following:

- Normal sadness
- Adjustment disorder
- Anxiety disorders
- Schizophrenia
- Organic brain syndromes.

PREVENTION:

Do not drink alcohol or use illegal drugs. These substances can make depression worse and might lead to thoughts of suicide.

Take your medication exactly as your doctor instructed. Ask your doctor about the possible side effects and what you should do if you have any. Learn to recognize the early signs that your depression is getting worse. The following tips might help you feel better:

- Do exercise and Yogam regularly
- Maintain good sleep habits
- Seek out activities that bring you pleasure
- Be a Volunteer or get involved in group activities
- Talk to someone you trust about how you are feeling

DRUG REVIEW

INTERNAL MEDICINE: *VENPOOSANI NEI* [7]

INGREDIENTS:

- Venpoosanikaai saaru (*Benincasa hispida)* -2 Padi (2.6 litres)
- Thazhai vizhuthu saaru (*Pandanus odoratissimus*) -1 Padi (1.3 litres)
- Thennampoo saaru *(Cocos nucifera)* -1 Padi (1.3 litres)
- Katrazhai saaru (*Aloe barbaensis)* -1 Padi (1.3 litres)
- Sevvilaneer *(Cocus nucifera)* -1 Padi (1.3 litres)
- Cow`s Ghee -2 Padi (2.6 litress)
- Cow`s Milk -2 Padi (2.6 litres)
- Kaattathippoo (*Woodfordia fruticosa)* -$3^{3}/_{4}$ Varagan (19.6g)
- Seeragam(*Cuminam cyminum)* -$3^{3}/_{4}$ Varagan (19.6g)
- Kothamalli (*Coriandrum sativam*) -$3^{3}/_{4}$ Varagan (19.6g)
- Saathikkaai (*Myristica fragrans*) -$3^{3}/_{4}$ Varagan (19.6g)
- Maasikaa (*Quercus infectoria*) -$3^{3}/_{4}$ Varagan (19.6g)
- Elam (*Elettaria cardamomum)* -$3^{3}/_{4}$ Varagan (19.6g)
- Vaalmilagu (*Piper nigram*) -$3^{3}/_{4}$ Varagan (19.6g)
- Sathipathiry (*Myristica fragrans)* -$3^{3}/_{4}$ Varagan (19.6g)
- Kurosani Omam (*Hyoscyamus niger)* -$3^{3}/_{4}$ Varagan (19.6g)
- Karkadagasingi *(Rhus succedanea*) -$3^{3}/_{4}$ Varagan (19.6g)
- Thriphalai -$3^{3}/_{4}$ Varagan (19.6g)
- Palm Sugar -2 Palam (70g)

Internal medicine **:** *Venpoosani Kirutham*

Dosage **:** 16 ml, twice a day

Vehicle **:** Sugar or Hot water

Duration of treatment: 48 days

Source :- Siddha vaithiya thirattu

EXTERNAL MEDICINE*:* ***SEERAGA ENNAI***[8]

Ingredients:

- Seeragam (*Cynodan dactylon*) -1 Palam(35 gms)
- Gingelly oil (*Sesamum Indicum*) -1 Padi(1.3L)

METHOD OF PREPARATION:

Add the both drugs in a large vessel by the given ratio .Gently heat the vessel. When the heat reached the optimum level to the cumin seeds scattered and the extracts of that will be mixed with oil. Then the oil is filtered and collected the container.

DISPENSING:

- The Kirutham is given in Pet container (100 gram for one week)
- Oil is given in pet bottles (Q.S for oil bath).

PROPERTIES OF TRIAL DRUGS (INTERNAL MEDICINE)

1.Thaazhai

Botanical Name : *Pandanus odoratissimus*

English Name **:** Fragrant screw - pine

Family **:** Pandanaceae

Part used Aerial root

Organoleptic Characters

Taste *:* *Thuvarppu*

Potency : *Thatpam*

Division : *Inippu*

General Property:

ÁÊ§°¡üÈ¡ý Áí¨¸Â÷ìÌ Á¡¾¡ó¾ô âôÀ¡õ ¦ÅÊî°â¿ü À°¢¨Â Å¢¨ÇìÌó- ¾Êò¾Ó¨Ä Íì¸¢Äò¨¾ ¦¿ö¨Âò ÐÄÅ¢ìÌï §°¡¨À¦ÂÛõ «ìÌÄò¨¾ ¿£ìÌõ «È£ [9]

2.Saathikkai

Botanical Name *: Myristica fragrans*

English Name : Nut mug

Family : Myristicaceae

Part used :Fruit

Organoleptic characters

Taste :Thuvarppu

Potency :Veppam

Division :Karppu

General property:

¾¡Ð ¿ð¼õ §À¾¢ °ÕÅ¡°¢ Âï°¢Ã §¿¡ö µÐÍÅ¡ °í¸¡°õ ¯ð¸¢Ã½£ -§Å§¾¡ ÊÄì¸¡ö ÅÕõÀ¢½£§À¡õ ²üÈÁÂø À¢ò¾í ÌÄì¸¡ ÂÕóÐÅ÷ìÌì ÜÚ [9]

Chemical constituents:

- Neolignan,
- Erythrosurinamensin
- Diaryl phenyl propanoid
- Virolane

3.*Saathipathiri*

Botanical Name : *Myristica fragrans*

English Name : Arillus of the nut

Family : Myristicaceae

Organoleptic characters

Taste ;Kaarppu, Thuvarppu

Potency :Veppam

Division :Karppu

General property:

°¡¾¢¾Õõ Àò¾¢Ã¢ìÌò ¾¡Àî ÍÃó¾½£Ôõ µÐ¸¢ýÈ À¢ò¾õ ¯ÂÕí¸¡ñ -¾¡ÐÅ¢÷ò¾¢ Ôñ¼¡í ¸¢Ã¸£½£§Â¡ §¼¡¾ì ¸Æ¢î°Äêõ Àñ¼¡í Ì¨È§Â À¸÷ [9]

Chemical constituents:

- Neolignan,
- Erythrosurinamensin
- Diaryl phenyl propanoid
- Virolane

Action :

- Carminative
- Aphrodisiac
- Stimulant

4.*Maasikkaai*

Botanical Name : *Quercus infectoria*

English Name : Magic Nuts, Oak galls

Family : Fagaceae

Part used :Fruit

Organoleptic characters

Taste Thuvarppu

Potency :Thattpam

Division :Kaarppu

General property:

«ì¸Ãí¸û §À¡ì¸¢Å¢Îõ Á¡È¡¾ ¦ÅôÀ¸üÚõ ¦ÁöìÌÕ¾¢ Á¡°¢ì¸¡ö ¦Áý§ÁÖõ- ¾ì¸¦¾¡Õ À¡Ä÷¸½ §¿¡ö §À¡ìÌõ Àý§Á¸ Óó¦¾¡¨ÄìÌõ §ÅÄ¨ÉÂ ¸ñ½¡ö Å¢ÇõÒ [9]

Chemical constituents:

- Tannin 50–70% ,
- Syringic acid,
- β-sitosterol,
- Amentoflavone,
- Hexamethyl ether,
- Isocryptomerin,
- Methyl betulate,
- Methyl oleanate
- Hexagalloyl glucose.

Action :

- Astringent
- Styptic
- Tonic

5.Thiriphalai

Botanical Name : *Terminalia chebula ,Terminalia bellerica* and *Phyllanthus embilica*

English Name : Thripalam

Family :Phyllanthaceae & Combretaceae

Part used :Seeds

Organoleptic characters

Taste Thuvarppu

Potency :Veppam

Division :Kaarppu

Chemical constituents:

- Gallic acid
- Tannins
- Palmitic acid
- Lenoleic acid
- Oleic acid

Action :

- Astringent
- Tonic

6.Seeragam

Botanical Name : *Cuminum cyminum*

English Name : cumin seeds or fruits

Family : Apiaceae

Part used :Seeds

Organoleptic characters

Taste Thuvarppu, Inippu

Potency :Thatppam

Division :Inippu

General property:

À¢ò¾¦ÁÛõ Áó¾¢Ã¢¨Âô À¢ýÉô ÀÎò¾¢ÂÅý
°òÐÕ¨Å ÔóÐÈóÐ °¡¾¢òÐ -Áò¾¦ÉÛõ
Ã¡°É¨Ô Á£¦Åýê ¿ñ¨Àô ÀÄôÀÎò¾¢
§À¡°ÉÌ ¼¡Ã¢¦°Ôõ §À¡÷. (§¾Ãý ¦ÅñÀ¡)

Chemical constituents:

- Cuminal (36.31%),
- Cuminic alcohol (16.92%),
- γ-terpinene (11.14%),
- Safranal (10.87%),
- p-cymene (9.85%)
- β-pinene (7.75%).

Action :

- Carminative
- Stomatic
- Stimulant
- Astringen

7.Elam

Botanical Name : *Elettaria cardamomum*

English Name :Cardamom seeds

Family : Zingiberaceae

Part used :Seeds

Organoleptic characters

Taste Kaarppu

Potency :Veppam

Division :Kaarppu

General property:

ÁÄÅ¡¾ §Á¡Î ÅÂ¢üêì ¦¸¡¾¢ôÒ °ÄÓÈø Å¡Â¢É¢ôÒ ¾¡¸õ – °Ä§À¾¢ §Å÷ìÌó ¾¨Ä§¿¡ö Á¢Ìåð¨° ³ÂÁ¢¨Å §À¡ìÌï°¢ü §ÈÄõ Ò¸ø [9]

Chemical constituents:

- α-terpinyl acetate (45.6%),
- 1,8-cineole (26%),
- Linalyl acetate (5.6%),
- Linalool (5.2%),
- α-terpineol(2.9%)
- Limonene (2.9%)

Action :

- Carminative
- Stomachic
- Stimulant

8.Vaalmilagu

Botanical Name *: Piper cubeba*

English Name : Tail-pepper

Family : Piperaceae

Part used : Immature fruit

Organoleptic characters

Taste Kaarppu,

Potency :Veppam

Division :Kaarppu

General property:

Å¡¾ À¢ò¾ ³Âõ ÅÂ¢üê ÅÄ¢¾¡¸ï
°£¾õ ÀÄ§¿¡ö °¢¨¾Ôí¸¡ñ -§À¡¾
«¾¢¾£ ÀÉÁ¡õ «½í¸Ã§° ¿¡éó
Ð¾¢Å¡ø Á¢Ç¸Õó¾î ¦°¡ø [9]

Chemical constituents:

- Monoterpenes (sabinene 50%, carene, α-thujene, 1,4-cineol and 1,8-cineol)

- Sesquiterpenes (copaene, α- and β-cubebene, δ-cadinene, caryophyllene, germacrene, cubebol).

Action :

- Carminative
- Diuretic
- Expectorant
- Stimulant

9.Kaattathippoo

Botanical Name : *Bauhinia tomentosa*

English Name : Holy mountain ebony

Family :Fabaceae

Part used :Fruit

Organoleptic characters

Taste Kaarppu, Bitter

Potency :Veppam

Division :Karppu

General property:

¯¾¢Ãì ¸ÎôSÀ¡ Î¾¢Ãì ¸Æ¢î°ø
Å¢¾¢Ãì ¸ÎõSÀ¾¢ §Á¸õ - ±¾¢÷¿¢ü¸
Á¡ð¼¡ ¾¸Öõ ÅÉ° ÁÄ÷¾¢ÕSÅ
¸¡ð¼¡ò¾¢ô âò¾ÉìÌì ¸¡ñ [9]

Chemical constituents:

- L-Menthol
- Rutin
- Kaempferol

Action :

- Antiperiodic
- Tonic

10.Karkadagasingi

Botanical Name : *Rhus succedanea*

English Name : The galls

Family :Anacardiaceae

Part used :unripe fruit

Organoleptic characters

Taste Thuvarppu,

Potency :Veppam

Division :Kaarppu

Chemical constituents:

- Gallic acid
- Buetin
- Beta-caryophyllene

Action :

- Astringent
- Tonic
- Nutritive
- Digestive
- Expectorant
- Stimulant

11.Kothamalli

Botanical Name : *Coriandrum sativam*

English Name : Coriander seeds

Family : Apiaceae

Part used : Seeds

Organoleptic characters

Taste Kaarppu,

Potency :Seedha Veppam

Division :Karppu

General property:

¦¸¡ò¾ÁøÄ¢ ¦ÅôÀõ ÌÇ¢÷¸¡öî°ø À¢ò¾Áó¾ï
°÷ò¾¢Å¢ì¸ø ¾¡¸¦Á¡Î ¾¡Ð¿ð¼õ -¸ò¾¢¦ÂÖõ
Å¡¾ Å¢¸¡÷Á¼÷ Åý¸÷ò¾ À¢Å¢Ã½õ
â¾Äò¾¢ø Å¡¾¸üÚõ §À¡üÚ [9]

Chemical constituents:

- Linalool
- Geranyl acetate
- Caryophyllene
- Cymene

Action :

- Carminative
- Diuretic
- Stomachic
- Stimulant

12.Kurosaani Omam

Botanical Name : *Hyoscyamus niger*

English Name : Henbaneseeds

Family :Solanaceae

Part used : Seeds

Organoleptic characters

Taste Karppu, Siru kaippu

Potency :Veppam

Division :Kaarppu

Chemical constituents:

- Hyoscyamine
- Scopalamine
- Atropine
- Hyoscyamide
- Cannabisin D
- Rutin
- Beta-Sitosterol
- Venkatasin

Action :

- Hypnotic
- Sedative
- Anodyne
- Anispasmodic

13.Thennai

Botanical Name : *Cocos nucifera*

English Name : Coconut tree

Family : Arecaceae

Part used : coconut flower juice

Organoleptic characters

Taste Thuvarppu,

Potency :Thadpam

Division :Inippu

General property:

§Á¸õ «¸ì¦¸¡¾¢ôÒ Å£ÚÅ¢ Ãò¾ôÀ¢ò¾õ
§Å¸ «°¢÷ì¸Ã§¿¡ö Å£ØÀ¢ÃÁ¢ - §¾¸ò¾¢ø
Å¢ýÉõÀ¡Ä¢ìÌõ Å¢¼À¡¸õ §À¡¸¦ÅýÈ¡ø
¦¾ýÉõÀ¡¨Çôâ¨Åò ¾¢ý [9]

Action :

- Refrigerant
- Stomachic
- Demulcent

13.Kattraazhai

Botanical Name : *Aloe Barbadensis*

English Name : Indian aloes

Family : Asphodelaceae

Part used :Latex,Pulp Extract

Organoleptic characters

Taste :Siru kaippu,

Potency :Thatpam

Division :Inippu

General property:

ÅüÈ¡ì ÌÁÃ¢¾ý¨É ÅüÈ¡¦ÄÉ ×ñ½¢Ûï°£÷
ÓüÈ¡ì ÌÁÃ¢¦ÂÉ ãé§Á - ¿üÈ¡ìÌó
¾¢ñ¨ÁÔ ÁøÄ¡ò ¦¾Ã¢¨ÅÂ§ÁÂ¡É¡Ö
Óñ¨ÁÁ¢Ì áÈ¡Á¡ Ôû [9]

Chemical constituents:

- Aloin
- Emodin
- Campesterol
- Beta Sitosterol
- Auxines
- Gibberellines
- Lignin
- Glucomannon

Action :

- Tonic
- Alterative
- Purgative

1. MATERIALS AND METHODS

STANDARD OPERATING PROCEDURE

The required raw drugs for the trial medicine had purchased from a well reputed country raw drug shop and drugs were authenticated by the competent authority Medicinal Botany and Gunapadam dept. After that the raw drugs had purified as per siddha literatures then the trial drug s prepared in Gunapadam laboratory of National Institute of Siddha.

BOTANICAL AUTHENTICATION CERTIFICATE NO: NISMB3612019

INTERNAL MEDICINE: *VENPOOSANI NEI*

INGREDIENTS:

- Venpoosanikaai saaru (*Benincasa hispida)* -2 Padi (2.6 litres)
- Thazhai vizhuthu saaru (*Pandanus odoratissimus*) -1 Padi (1.3 litres)
- Thennampoo saaru *(Cocos nucifera)* -1 Padi (1.3 litres)
- Katrazhai saaru (*Aloe barbaensis)* -1 Padi (1.3 litres)
- Sevvilaneer *(Cocus nucifera)* -1 Padi (1.3 litres)
- Cow`s Ghee -2 Padi (2.6 litres)
- Cow`s Milk -2 Padi (2.6 litres)
- Kaattathippoo (*Woodfordia fruticosa)* -$3^{3}/_{4}$ Varagan (19.6g)
- Seeragam(*Cuminam cyminum)* -$3^{3}/_{4}$ Varagan (19.6g)
- Kothamalli (*Coriandrum sativam*) -$3^{3}/_{4}$ Varagan (19.6g)
- Saathikkaai (*Myristica fragrans*) -$3^{3}/_{4}$ Varagan (19.6g)
- Maasikaai (*Quercus infectoria*) -$3^{3}/_{4}$ Varagan (19.6g)
- Elam (*Elettaria cardamomum)* -$3^{3}/_{4}$ Varagan (19.6g)

- Vaalmilagu (*Piper nigram*) -$3^{3}/_{4}$ Varagan (19.6g)
- Sathipathiry (*Myristica fragrans)* -$3^{3}/_{4}$ Varagan (19.6g)
- Kurosani Omam (*Hyoscyamus niger)* -$3^{3}/_{4}$ Varagan (19.6g)
- Karkadagasingi *(Rhus succedanea*) -$3^{3}/_{4}$ Varagan (19.6g)
- Thriphalai -$3^{3}/_{4}$ Varagan (19.6g)
- Palm Sugar -2 Palam (70g)

METHOD OF PURIFICATION OF RAW DRUGS[10]:

Purification of Kumari:

To be Boiled with the Cow Milk

Purification of Aavin nei:

To be Boiled until removal of water

Purification of Sathikkaai:

To be removed the outer layer and Dry in sun light

Purification of Sathipathiri:

To be dried in Sun light

Purification of Thriphalai:

To be removed the inner part(seed) of each herb and take the outer part

Purification of Seeragam:

It will be dried in the Sun light

Purification of Elam:

It to be Roasted

Purification of Vaalmilagu:

To be removed the stems and Dry in sun light

Purification of Kaattathippoo:

To be removed the petals and stems and Dry in sun light

Purification of Karkadagasingi:

To be Fried with the Vaathumai Ghee

Purification of Kothamalli:

To be dried in shadow

Purification of Kurosani omam:

To be removed the Dust and Soil by Filteration

Purification of Seeni Karkandu:

To be powdered as fine molecules

METHOD OF PREPARATION:

Initially all the plant extracts and juices exept the raw drugs had taken in a large vessel as per the given amount. Then, all other contents except cow`s milk and sugar were powdered into fine particles. These powder grinded with the cow`s milk and then it mixed with the cow`s milk by the given ratio. Then, the mixture mixed into the vessel. Then,it gently heated for optimum temperature. And,when the perfect term came it had taken away and mixed with the sugar as per the given ratio. Then,had transferred into pet container.

EXTERNAL MEDICINE*:* ***SEERAGA ENNAI***

Ingredients:

- Seeragam (*Cynodan dactylon*) -1 Palam(35 gms)
- Gingelly oil (*Sesamum Indicum*) -1 Padi(1.3L)

METHOD OF PREPARATION:

Both drugs were added in a large vessel by the given ratio .Gently heat the vessel. When the heat reached the optimum level to the cumin seeds scattered and the extracts of that had mixed with oil. Then the oil had filtered and collected the container.

DISPENSING:

- The Kirutham is given in Pet container (100 gram for one week)
- Oil is given in pet bottles (Q.S for oil bath).

Benincasa hispida

Aloe barbaensis

Cocus nucifera

Cocus nucifera

Terminalia bellerica

Myristica Fragrans

Terminalia chebula

Phyllanthus embilika

Woodfordia fruticosa

Elettaria Cardamomum

Myristica Fragrans

Coriandrum sativum

Quercus infectoria

Hyoscyamus nigra

Piper nigram

Cuminum cyminum

Pandanus odorattismus

Ghee

Palm Sugar

Milk

Venpoosani Nei

Seeraga Thylam

BIO CHEMICAL EVALUATION

Experimental procedure

5 g of *VENPOOSANI KIRUTHAM* was taken in a 250 ml of clean beaker and 50ml of distilled water was added to it. Then it was boiled well for about 10 min. Then it is allowed to cool and filtered in a 100 ml volumetric flask and made up to 100 ml with distilled water. This preparation is used for the qualitative analysis of acidic/ basic radicals and biochemical constituents in it.

Preparation of extract

5gm of VENPOOSANI KIRUTHAM was weighed accurately and placed in a 250ml clean beaker and 50ml of distilled water was added with it. Then it was boiled well for about 10 minutes. Then it was allowed to cool and filtered in a 100ml volumetric flask and made up to 100ml with distilled water. The bio-chemical analysis of *VENPOOSANI KIRUTHAM* was done at Biochemistry lab, National Institute of siddha, Chennai-47.

Preliminary test for Copper, Sodium, Silicate and Carbonate

- **Test for Silicate**: a. A little (500mg) of the sample is shaken well with distilled water. b. A little (500mg) of the sample is shaken well with con. HCl/Con. H2So4.
- **Action of Heat:** A small amount (500mg) of the sample is taken in a dry test tube and heated gently at first and then strong.
- **Action of Heat**: A small amount (500mg) of the sample is taken in a dry test tube and heated gently at first and then strong.
- **Flame Test:** A small amount (500mg) of the sample is made into a paste with con. HCl in a watch glass and introduced into non-luminous part of the Bunsen flame.
- **Ash Test**: A filter paper is soaked into a mixture of sample and dil. cobalt nitrate solution and introduced into the Bunsen flame and ignited.

Test for Acid Radicals

- **Test for Sulphate**: 2ml of the above prepared extract was taken in a test tube and 2ml of 4% dil. ammonium oxalate solution was added.
- **Test for Chloride**: 2ml of the above prepared extracts was added with 2ml of dil-HNO3 until the effervescence ceases off. Then 2 ml of silver nitrate solution was added.

- **Test for Phosphate**: 2ml of the extract was treated with 2ml of con. HNo3 and 2ml of dil. ammonium molybdate solution.
- **Test for Carbonate**: 2ml of the extract was treated with 2ml dil. magnesium sulphate solution
- **Test for Nitrate**:1gm of the substance was heated with copper turning and concentrated H2SO4 and viewed the test tube vertically down.
- **Test for Sulphide**: 1gm of the substance was treated with 2ml of con. HCL
- **Test for Fluoride & Oxalate**: 2ml of extract was added with 2ml of dil. Acetic acid and 2ml dil. calcium chloride solution and heated.
- **Test for Nitrite**: 3drops of the extract was placed on a filter paper, on that-2 drops of dil. acetic acid and 2 drops of dil. Benzidine solution were placed.

Test for Basic Radicals

- **Test for Lead**: 2ml of the extract was added with 2ml of dil. potassium iodine solution.
- **Test for Copper**: One pinch (50mg) of substance was made into paste with con. HCl in a watch glass and introduced into the non-luminous part of the flame.
- **Test for Aluminium**: In the 2ml of extract dil. sodium hydroxide was added in 5 drops to excess.
- **Test for Iron:** a. To the 2ml of extract add 2ml of dil. ammonium solution
- b. To the 2ml of extract 2ml thiocyanate solution and 2ml of con HNo3 is added
- **Test for Zinc**: In 2ml of the extract dil. sodium hydroxide solution was added in 5 drops to excess and dil. ammonium chloride was added.
- **Test for Calcium**: 2ml of the extract was added with 2ml of 4% dil. ammonium oxalate solution
- **Test for Magnesium**: In 2ml of extract dil. sodium hydroxide solution was added in drops toexcess.
- **Test for Ammonium**: In 2ml of extract 1 ml of Nessler's reagent and excess of dil. sodium hydroxide solution were added.
- **Test for Potassium**: A pinch (25mg) of substance was treated with 2ml of dil. sodium nitrite solution and then treated with 2ml of dil. cobalt nitrate in 30% dil. glacial acetic acid.
- **Test for Sodium:** 2 pinches (50mg) of the substance was made into paste by using HCl and introduced into the blue flame of Bunsen burner.

- **Test for Mercury**: 2ml of the extract was treated with 2ml of dil. sodium hydroxide solution.
- **Test for Arsenic:** 2ml of the extract was treated with 2ml of dil. sodium hydroxide solution.

Other constituents:

- **Test for Starch:** 2ml of extract was treated with weak dil. iodine solution
- **Test for Reducing Sugar**: 5ml of Benedict's qualitative solution was taken in a test tube and allowed to boil for 2 minutes and added 8 to 10 drops of the extract and again boil it for 2 minutes.
- **Test for The Alkaloids**:

a) 2ml of the extract is treated with 2ml of dil. Potassium iodide solution.
b) 2ml of the extract is treated with 2ml of dil. picric acid.

- **Test for Tannic Acid:** 2ml of extract was treated with 2ml of dil. ferric chloride solution
- **Test for Unsaturated Compound**: In the 2ml of extract 2ml of dil. Potassium permanganate solution was added.
- **Test for Amino Acid**: 2 drops of the extract were placed on a filter paper and dried well, and then 20 ml of Burette reagent was added in it.

CLINICAL STUDY

Clinical trail Approval Registration

The clinical trail was approved by the Institutional Ethical Committee (IEC) of National Institute of Siddha, Chennai 47, [NIS/13-IEC/2017-1-05/22-11-2017] and further registered Clinical Trail Registry of India [REG. NO. CTRI/2018/08/021389].

Study type : An open clinical trial

Study place : OPD of Ayothidoss Pandithar Hospital, National Institute of Siddha Tambaram sanatorium, Chennai-47

Study period : 2016-2019

Sample size : 30 Patients

SUBJECT SELECTION:

Patients reporting with symptoms of inclusion criteria have subjected to screening test and documentation.

INCLUSION CRITERIA

- Age: between 20 years and 60 years
- Sex: Male and female
- Depressed mood
- Reduced level of interest
- Considerable loss or gain of weight
- Insomnia or hypersomnia
- Psychomotor agitation or retardation
- Fatigue
- Thoughts of extreme guilt
- Diminished ability to think or concentrate
- Willing to participate in trial and signing consent by fulfilling the conditions of proforma
- Willing to give blood sample for analysis for laboratory investigations

EXCLUSION CRITERIA

- Pregnancy and lactation
- Diabetes mellitus
- Psychosomatic disorders
- Cardiac disease
- Any other serious systemic illness

WITHDRAWAL CRITERIA

- Intolerance to the drug and development of adverse reactions during drug trial.
- Poor patient compliance and defaulters.
- Patient turning unwilling to continue in the course of clinical trial.
- Occurrence of any serious illness
- Increase in the severity of the symptoms.

TESTS AND ASSESMENTS

1. Clinical assessment
2. Siddha system assessment
3. Routine investigations

1. **CLINICAL ASSESMENT**

- Depressed mood
- Reduced level of interest
- Considerable loss or gain of weight
- Insomnia or hypersomnia
- Fatigue
- Thoughts of extreme guilt
- Suicidal thoughts

2. GRADATION

- Patient’s Name
- Date of Assessment

To rate the severity of depression in patients who are already diagnosed as depressed, administer this questionnaire. The higher the score, the more severe the depression.

Beck' s Depression Inventory

This depression inventory can be self-scored. The scoring scale is at the end of the questionnaire.

1.

0 I do not feel sad.

1 I feel sad

2 I am sad all the time and I can't snap out of it.

3 I am so sad and unhappy that I can't stand it.

2.

0 I am not particularly discouraged about the future.

1 I feel discouraged about the future.

2 I feel I have nothing to look forward to.

3 I feel the future is hopeless and that things cannot improve.

3.

0 I do not feel like a failure.

1 I feel I have failed more than the average person.

2 As I look back on my life, all I can see is a lot of failures.

3 I feel I am a complete failure as a person.

4.

0 I get as much satisfaction out of things as I used to.

1 I don't enjoy things the way I used to.

2 I don't get real satisfaction out of anything anymore.

3 I am dissatisfied or bored with everything.

5.

0 I don't feel particularly guilty

1 I feel guilty a good part of the time.

2 I feel quite guilty most of the time.

3 I feel guilty all of the time.

6.

0 I don't feel I am being punished.

1 I feel I may be punished.

2 I expect to be punished.

3 I feel I am being punished.

7.

0 I don't feel disappointed in myself.

1 I am disappointed in myself.

2 I am disgusted with myself.

3 I hate myself.

8.

0 I don't feel I am any worse than anybody else.

1 I am critical of myself for my weaknesses or mistakes.

2 I blame myself all the time for my faults.

3 I blame myself for everything bad that happens.

9.

0 I don't have any thoughts of killing myself.

1 I have thoughts of killing myself, but I would not carry them out.

2 I would like to kill myself.

3 I would kill myself if I had the chance.

10.

0 I don't cry any more than usual.

1 I cry more now than I used to.

2 I cry all the time now.

3 I used to be able to cry, but now I can't cry even though I want to

11

0 I am no more irritated by things than I ever was.

1 I am slightly more irritated now than usual.

2 I am quite annoyed or irritated a good deal of the time.

3 I feel irritated all the time.

12.

0 I have not lost interest in other people.

1 I am less interested in other people than I used to be.

2 I have lost most of my interest in other people.

3 I have lost all of my interest in other people.

13.

0 I make decisions about as well as I ever could.

1 I put off making decisions more than I used to.

2 I have greater difficulty in making decisions more than I used to.

3 I can't make decisions at all anymore.

14.

0 I don't feel that I look any worse than I used to.

1 I am worried that I am looking old or unattractive.

2 I feel there are permanent changes in my appearance that make me look unattractive

3 I believe that I look ugly.

15.

0 I can work about as well as before.

1 It takes an extra effort to get started at doing something.

2 I have to push myself very hard to do anything.

3 I can't do any work at all.

16.

0 I can sleep as well as usual.

1 I don't sleep as well as I used to.

2 I wake up 1-2 hours earlier than usual and find it hard to get back to sleep.

3 I wake up several hours earlier than I used to and cannot get back to sleep.

17.

0 I don't get more tired than usual.

1 I get tired more easily than I used to.

2 I get tired from doing almost anything.

3 I am too tired to do anything.

18.

0 My appetite is no worse than usual.

1 My appetite is not as good as it used to be.

2 My appetite is much worse now.

3 I have no appetite at all anymore.

19.

0 I haven't lost much weight, if any, lately.

1 I have lost more than five pounds.

2 I have lost more than ten pounds.

3 I have lost more than fifteen pounds.

20.

0 I am no more worried about my health than usual.

1 I am worried about physical problems like aches, pains, upset stomach, or constipation.

2 I am very worried about physical problems and it's hard to think of much else.

3 I am so worried about my physical problems that I cannot think of anything else.

21.

0 I have not noticed any recent change in my interest in sex.

1 I am less interested in sex than I used to be.

2 I have almost no interest in sex.

3 I have lost interest in sex completely.

INTERPRETING THE BECK DEPRESSION INVENTORY

Now that you have completed the questionnaire, add up the score for each of the twenty-one questions by counting the number to the right of each question you marked. The highest possible total for the whole test would be sixty-three. This would mean you circled number three on all twenty-one questions. Since the lowest possible score for each question is zero, the lowest possible score for the test would be zero. This would mean you circles zero on each question.

You can evaluate your depression according to the Table below.

Total Score_____ Levels of Depression

1-10_____These ups and downs are considered normal

11-16_____Mild mood disturbance

17-20_____Borderline clinical depression

21-30_____Moderate depression

31-40_____Severe depression

over 40_____ Extreme depression

2.INVESTIGATIONS BASED ON SIDDHA SYSTEM:

1. Naadi
2. Sparisam
3. Naa
4. Niram
5. Mozhi
6. Vizhi
7. Malam
8. Moothiram

- Neerkkuri:
- Neikkuri:

3.INVESTIGATION:

BLOOD:

- Hb
- Total WBC Count
- DC
    - Polymorphs
    - Lymphocytes
    - Eosinophils
    - Monocytes
    - Basophils
- Total RBC count

- ESR
    - ½ Hr: 1 Hr:
- Blood sugar
    - Fasting: PP:
- Serum cholesterol

URINE

- Albumin
- Sugar(F) (PP)
- Deposits

RENAL FUNCTION TESTS

- Blood Urea
- Serum Creatinine
- Uric acid

LIVER FUNCTION TESTS

- Serum total bilirubin
- Direct bilirubin
- Indirect bilirubin
- Serum Alkaline phosphatases
- SGOT
- SGPT

PRIMARY OUTCOME:

- Reduction in the symptoms of Depression.

DATA COLLECTION:

Required information were collected from each patient by using the following forms

FORMS:

- FORM I - Screening and selection Proforma
- FORM II - Clinical assessment Proforma
- FORM III - Laboratory investigation Proforma

- FORM IV - Drug compliance form
- FORM V - Patient information sheet

- FORM VI - Consent form
- FORM VII - Withdrawal form/Pharmacovigilance
- FORM VIII - Dietary Advice form

STUDY ENROLLMENT:

- In this study, patients reporting at the OPD with symptoms of depressed mood, fatigue, loss of interest, suicidal thoughts, insomnia, hypersomnia were examined clinically for enrolling in the study based on inclusion and exclusion criteria.
- The patients who were enrolled were informed (Form VI) about the study, trial drug, possible outcomes and the objectives of the study in the language and terms understandable to them and the informed consent would be obtained in writing from them in the consent form (Form VI).
- All these patients were given unique registration card in which the patients Registration number of the study, Address, Phone number and Doctors phone number etc. had given, so as to report easily should any complications arise.
- Complete clinical history, complaints, duration, examination findings and laboratory investigations -- were recorded in the prescribed Proforma.
- Screening Form- I were filled up: Form –II and Form –III were used for recording the patient's history, clinical examination of symptoms, signs and laboratory investigations respectively. Patients were advised to take the trial drug and appropriate dietary advice would be given according to the patients' perfect understanding.

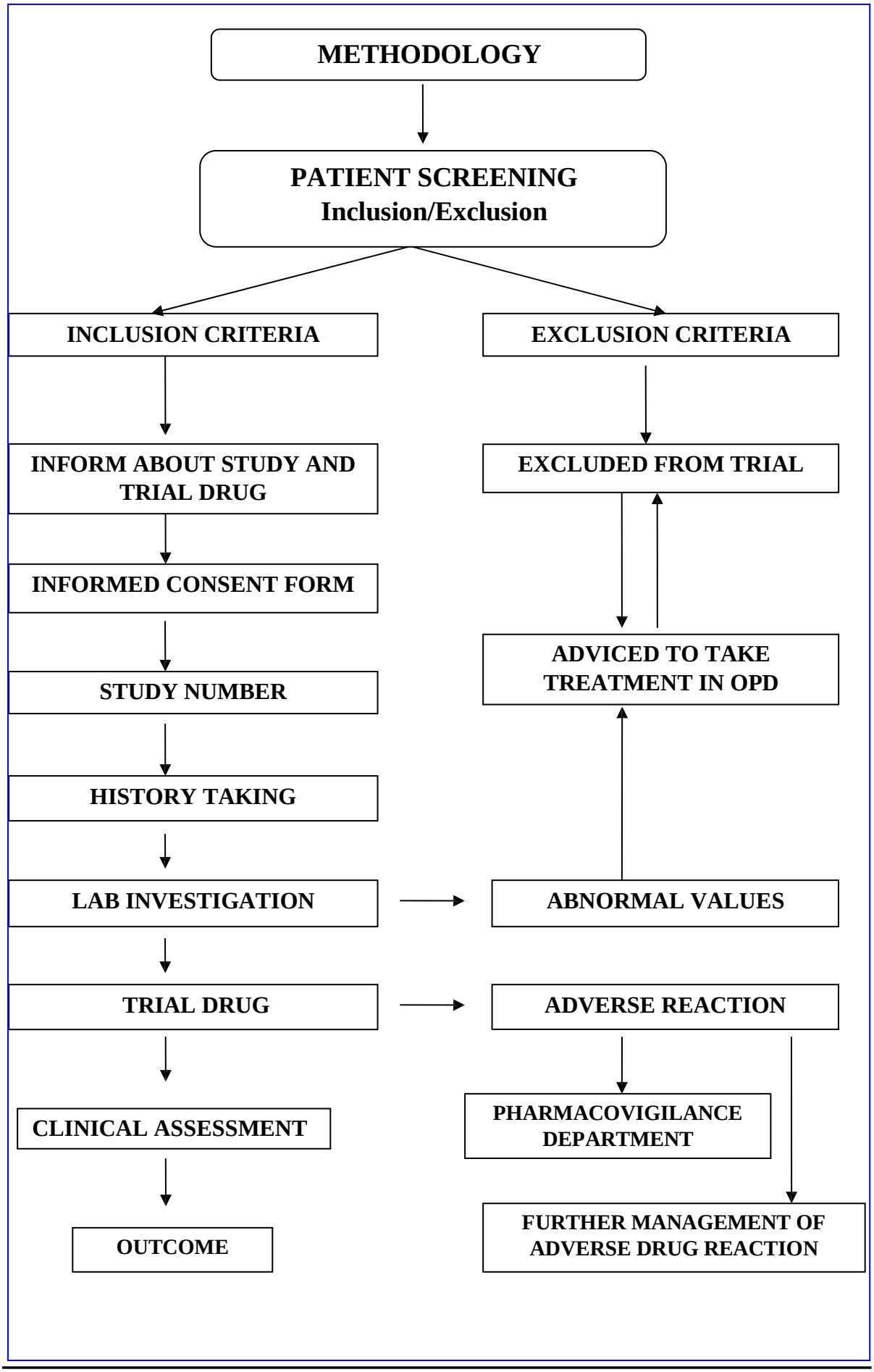
CONDUCT OF THE STUDY:

- Before the treatment, purgation therapy had given with Agasthiyar Kuzhambu 200mg in the early morning with Inji chaaru (ginger juice) for normalizing the vital humors.

- Then the trial Medicines "*Venpoosani kirutham*" (internal) and "*Seeraga Thylam*" (external) was given for 48 days.

- The patients were requested to visit the hospital OPD once in 7 days for 48 days. In each and every visit the patients received trial medicines and also underwent clinical assessment and the prognosis were recorded with the supervision of the Faculty member**.**

- Laboratory investigations were done before and after the trial. At the end of the trial, the patients were advised to visit the OPD for further 2 months for follow-up for any recurrence. Defaulters had not allowed to continue and withdrawn from the study with fresh case had being inducted.


METHODOLOGY
PATIENT SCREENING
Inclusion/Exclusion
INCLUSION CRITERIA
EXCLUSION CRITERIA
INFORM ABOUT STUDY AND TRIAL DRUG
EXCLUDED FROM TRIAL
INFORMED CONSENT FORM
ADVICED TO TAKE TREATMENT IN OPD
STUDY NUMBER
HISTORY TAKING
LAB INVESTIGATION
ABNORMAL VALUES
TRIAL DRUG
ADVERSE REACTION
CLINICAL ASSESSMENT
PHARMACOVIGILANCE DEPARTMENT
OUTCOME
FURTHER MANAGEMENT OF ADVERSE DRUG REACTION

ADVERSE/SERIOUS EFFECTS MANAGEMENT:

- In this study, no adverse events were observed during the course of the treatment and follow-up periods.

DATA ANALYSIS:

- After enrolled the patients in the study, a separate file for each patient was maintained and all forms were kept in the file.
- Study number and patient's number were entered on the top of the file for easy identification.
- Whenever the patients visit to OPD during the study period, the necessary entries were made at the assessment forms.
- The screening forms were filled separately.
- All forms were further scrutinized by Senior Research Officer (Statistics) for logical errors and incompleteness of data to avoid any bias.
- No modification in the results is permitted for unbiased reports. The software of SPSS used for data analysis.

RESULTS OF PRECLINICAL STUDY:

1) BIO-CHEMICAL AND ELEMENTAL ANALYSIS OF TRIAL MEDICINE

Qualitative Analysis

S.NO	EXPERIMENT	OBSERVATION	INFERANCE
1.	**Appearance of the sample**	Greenish Brown in Colour	
2.	**Solubility** a. A little of the sample is shaken well with distilled water. b. A little of the sample is Shaken well with con. Hcl Con. H2SO4.	Completely soluble Completely soluble	Presence of Silicate
3.	**Action of Heat** A small amount of the sample is taken in a dry test tube and heated gently at first and then Strong.	White fumes not evolved Brown fumes not evolved	Absence of Carbonate. Absence of Nitrate
4.	**Flame Test** A small amount of the sample is made into a paste with con. Hcl in a watch glass and introduced into non-luminous part of the Bunsen flame.	White flame is Appeared	Absence of Copper
5.	**Ash Test** A filter paper is soaked into a mixture of sample and cobalt nitrate solution and introduced into the Bunsen flame and ignited	No Yellow colour Flame	Absence of Sodium.

PREPARATION OF EXTRACT

5 gm of *VENPOOSANI KIRUTHAM* was weighed accurately and placed in a 250 ml clean beaker. Then 50 ml distilled water was added and dissolved well. Then it is boiled well for about 10 minutes. It was cooled and filtered in a 100 ml volumetric flask and then it was made up to 100 ml with distilled water. This fluid was taken for analysis.

1.TEST FOR ACID RADICALS:

S.NO	EXPERIMENT	OBSERVATION	INFERENCE
1.	**Test for Sulphate:** a. 2 ml of the above prepared extract is taken in a test tube to this added 2ml of 4% ammonium oxalate solution. b. 2ml of the above prepared extract is added with 2 ml of dilHcl is added until the effervescence ceases off. Then 2ml of Barium chloride solution is added.	Cloudy appearance present A white precipitate insoluble in con. Hcl is obtained	Absence of sulphate
2.	**Test for Chloride**: 2 ml of the above prepared Extract is added with dil. HNO3 till the effervescence ceases. Then 2 ml of silver nitrate solution is added.	Cloudy appearance present (Mild trace element)	Presence of chloride
3.	**Test for Phosphate**: 2 ml of the extract is treated with 2ml of ammonium molybdate solution and 2 ml of con. HNO3	Cloudy yellow Appearance abscent	Absence of Phosphate
4.	**Test for Carbonate:**	cloudy appearance	Presence of Carbonate.

	2m1 of the extract is treated with 2ml magnesium sulphate solution		
5.	**Test for Nitrate:** 1gm of the substance is heated with copper turnings and concentrated H_2SO_4 and viewed the test tube vertically down.	No characteristic changes	Absence of nitrate
6.	**Test for Sulphide**: 1 gm of the substance is treated with 2m1 of con. Hcl.	No rotten egg smelling gas evolved	Absence of sulphide
7.	**Test for Fluoride and oxalate:** 2 m1 of The Extract Is Added With 2m1of Acetic Acid and 2 m1 calcium Chloride solution and heated.	No cloudy appearance	Absence of fluoride and oxalate
8.	**Test for Nitrate:** 3 drops of extract is placed on a filter paper, on that 2 drops of acetic Acid and 2 drops of benzidine solution is placed.	No characteristic changes	Absence of nitrate
9.	**Test for Borate:** 2 pinches of the substance are made into paste by using sulphuric acid and alcohol (95%) and introduced into the blue flame	No characteristic changes	Absence of borate

II. TEST FOR BASIC RADICALS

S.no	EXPERIMENT	OBSERVATION	INFERENCE
1.	**Test for Lead:** 2 m1of the extract is added with 2m1of potassium iodide solution.	Yellow precipitate is obtained	Presence of Lead.
2.	**Test for Copper:** a. One pinch of substance is made into paste with con. Hcl in a watch glass and introduced into the non-luminous part of the flame. b. 2 ml of extract is added with excess of ammonia solution.	Blue colour flame Precipitate not formed No Blue colour precipitate	Absence of Copper. Absence of Copper.
3.	**Test For Aluminium:** Take the 2m1of the extract sodium hydroxide is added in drops to excess.	characteristic changes present	Presence of Aluminium.
4.	**Test For Iron (Ferrous) :** To the 2 ml of extract 2m1 ammonium thiocyanate solution and 2m1of con.HNO3 is added.	Blood red colour Appearance present	Presence of Iron.
5.	**Test For Zinc:** To 2m1 of the extract sodium hydroxide solution is added in drops to excess.	White precipitate is Formed	Presence of Zinc.
6.	**Test For Calcium:** To 2m1 of the extract is added with 2m1 of 4% ammonium oxalate Solution.	Cloudy appearance and white precipitate is obtained	Absence of Calcium

7.	**Test For Magnesium**: To 2ml of extract sodium hydroxide solution is added in drops to excess.	White precipitate is obtained.	Presence of Magnesium
8.	**Test For Ammonium:** To 2ml of extract few ml of Nessler's reagent and excess of sodium hydroxide solution are added	Brown colour Appeared	Presence of Ammonium
9.	**Test For Potassium**: A pinch of substance is treated with 2ml of sodium nitrite solution and then treated with 2m1 of cobalt nitrate in 30% glacial acetic acid.	No Yellowish precipitate is obtained	Absence of Potassium
10.	**Test For Sodium:** 2 pinches of the substance is made into paste by using HCL and introduced into the blue flame of Bunsen burner.	No Yellow Color Flame appeared.	Absence of Sodium.
11.	**Test For Mercury:** 2 m1 of the extract is treated with 2ml of sodium hydroxide solution.	Yellow precipitate is not obtained	Absence of Mercury.
12.	**For Arsenic Test**: 2 m1 of the extract is treated with 2m1 of sodium hydroxide solution.	No brownish red Precipitate is obtained	Absence of Arsenic.

III. MISCELLANEOUS:

S.NO	EXPERIMENT	OBSERVATION	INFERENCE
1.	Test for Starch: 2 ml of extract is treated with weak iodine solution.	blue colour developed	Presence of Starch.
2.	Test For Reducing Sugar: 5 ml of Benedict's qualitative solution is taken in a test tube and allowed to boil for 2 minutes and added 8 to 10 drops of the extract and again boil it for 2 minutes. The colour changes are noted.	Brick red colour not developed	Absence of Reducing sugar.
3.	Test For The Alkaloids: a. 2m1 of the extract is treated with 2 ml of potassium Iodide solution. b. 2m1 of extract is treated with 2ml of picric acid. c. 2m1 of the extract is treated with 2ml of phosphotungstic acid.	Red colour developed Trace Yellow colour developed White precipitate developed	Presence of Alkaloid. Trace of Alkaloid present. Presence of Alkaloid.
4.	Test for Tannic Acid: 2 ml of extract is treated with 2ml of ferric chloride solution.	Black precipitate is not Obtained	Absence of tannin
5.	Test for Unsaturated Compound: To the 2ml of extract 2ml of Potassium Permanganate solution is added.	Potassium Permanganate is not decolourised	Absence of Unsaturated Compound.
6.	Test For Amino Acid: 2 drops of the extract is placed on a filter paper and dried well and 2 ml of biuret reagent is added .	No Violet colour Developed	Absence of Amino Acids

7.	Test For type of Compound: 2ml of the extract is treated with 2 ml of ferric chloride solution.	No Green colour developed No Red colour developed No Violet colour developed No blue colour developed	Absence of oxy quinole epinephrine and pyro catechol. Anti pyrine, Aliphatic amino acids and Meconic acid are absent. Apomorphine, Salicylate and Resorcinol are absent. Morphine, Phenol cresol and hydro quinone are absent

Result:

The bio chemical analysis of *VENPOOSAN KIRUTHAM* shown the presents of Chloride, carbonate,magnesium,ammonium, aluminium,lead,zinc, iron, starch, alkaloids.

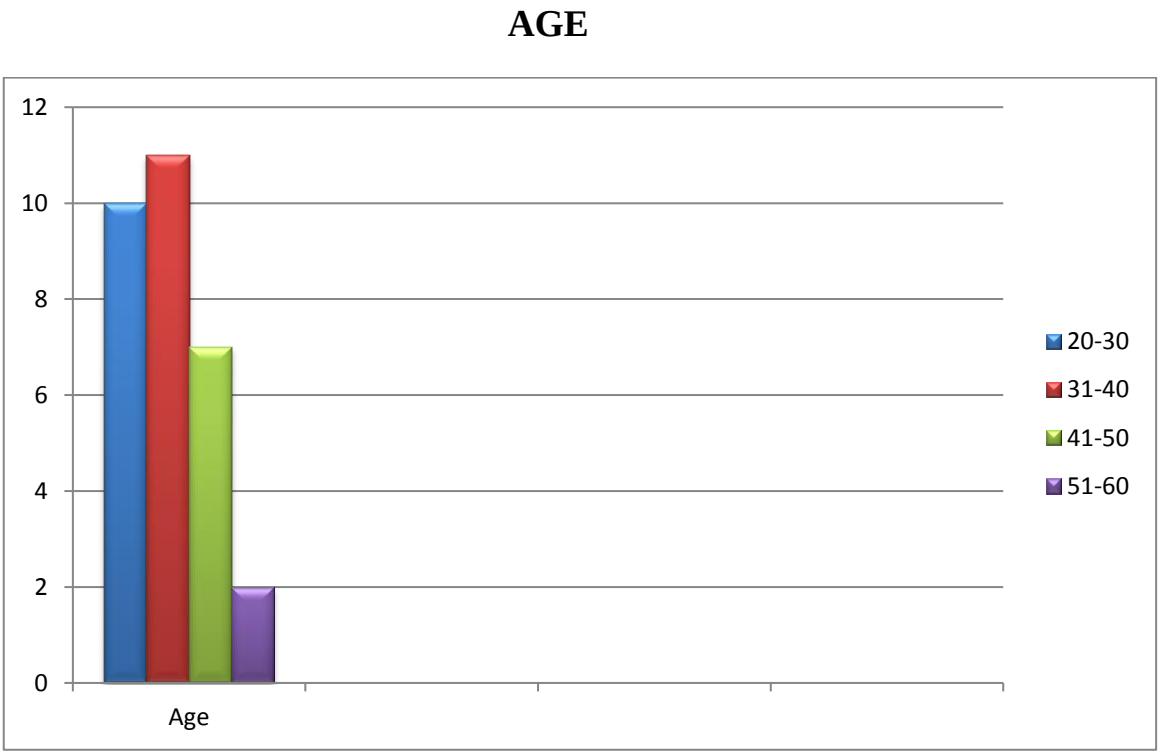
2. OBSERVATION AND RESULTS CLINICAL STUDY

The observation and results were studied and tabulated under the following heading.

- Age and sex
- Occupational Status
- Family History
- Diet Habits
- Thinai Reference
- Kaalam Distribution
- Yakkai Ilakkanam (Physical Constitution)
- Gunam
- Duration of Illness
- Distributions of Muthodam (Three Humors)
- Udal Kattukkal
- En Vagai Thervugal
- Neerkkuri, Neikkuri
- Haematology General report
- Haematology Biochemistry report
- Urine Analysis
- Result and Statistical Significance of BECK DEPRESSION SCALE score
- Result and Statistical significance of trail medicine.

1. Age Distribution:

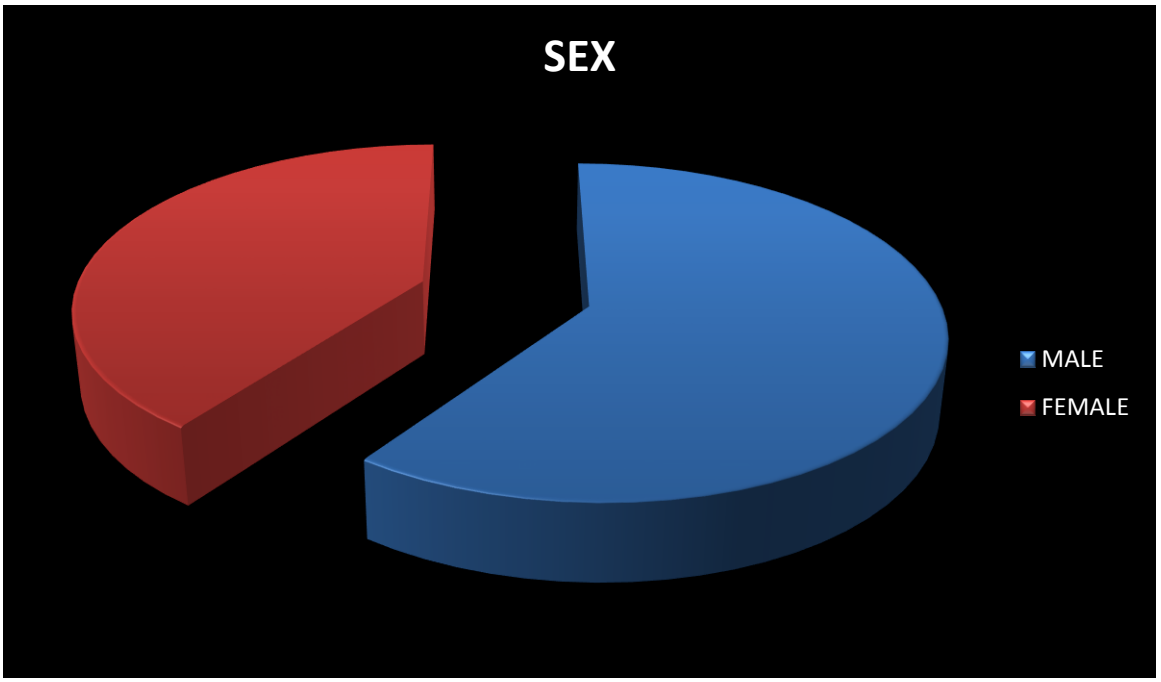
S.NO	AGE	NO OF CASES	PERCENTAGE
1.	20-30	10	33.3%
2.	31-40	11	36.6%
3.	41-50	7	23.3%
4.	51-60	2	6.6%
Total		30	100%



Observation: The patients were selected from all age groups as given above and the maximum numbers of patients 11(36.6%) were in the age groups between 31-40.

2. Sex:

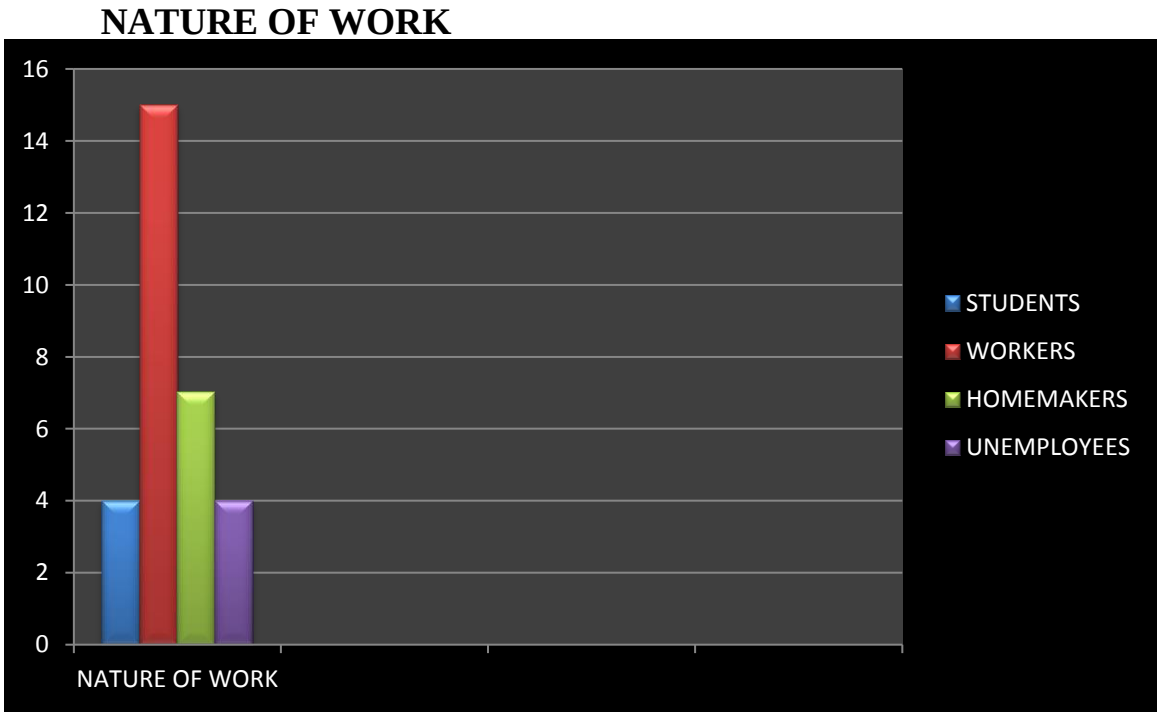
S.NO	SEX	NO OF CASES	PERCENTAGE
1.	Male	18	60%
2.	Female	12	40%
Total		30	100%



Observation: Among the 30 patients selected for this study, 60% were males and 40% were females.

3.Occupational:

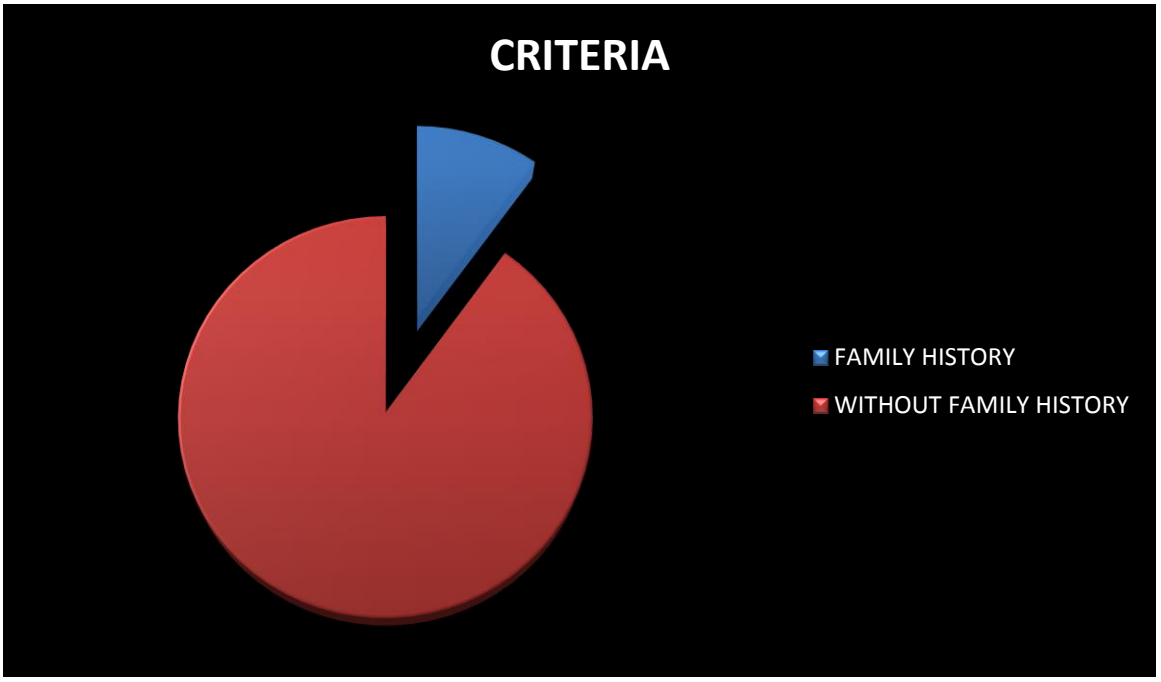
S.NO	NATURE OF WORK	NO OF CASE	PERCENTAGE
1.	Students	4	13.3%
2.	Workers	15	50%
3.	Home maker	7	23.3%
4.	Unemployed	4	13.3%
Total		30	100%



Observation: Among this study majority of patients were workers.

4.Family history:

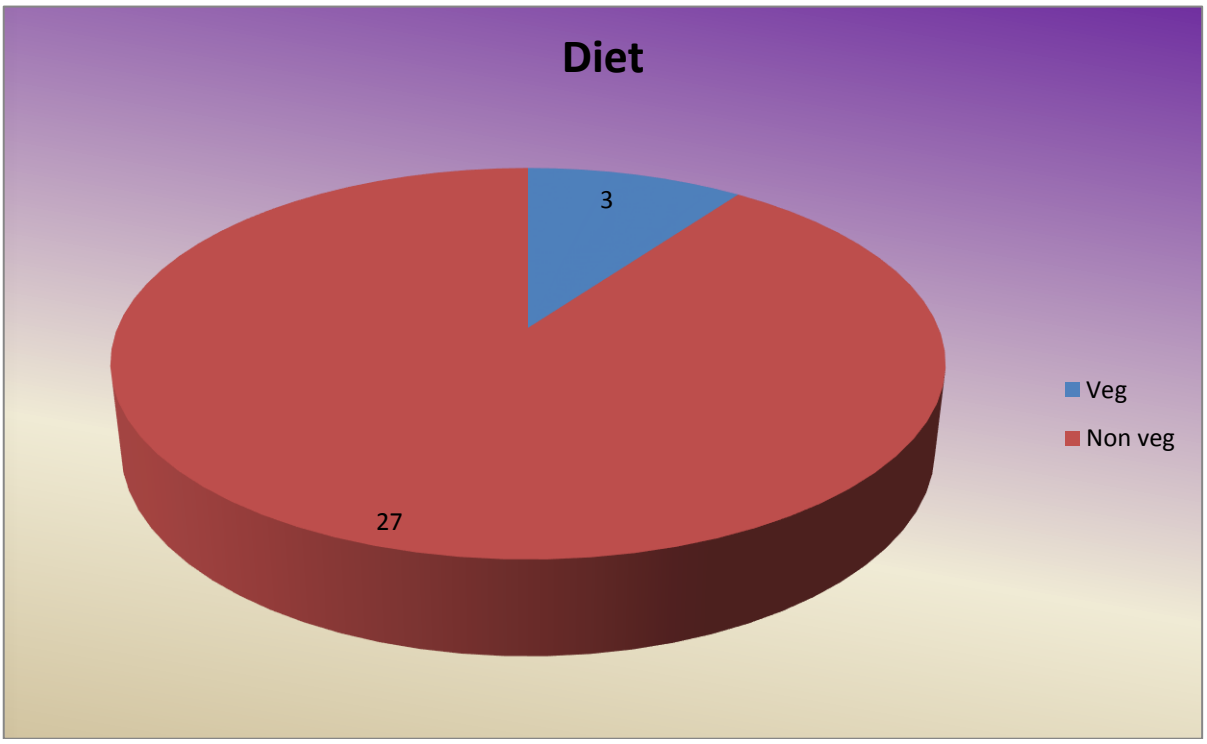
S.NO	CRITERIA	NO OF CASE	PERCENTAGE
1.	Family History (Relevant)	03	10%
2.	Family History (No relevant)	27	90%
Total		30	100%



Observation: In this study only 3 number (10%) of cases had positive family history.

5.Dietary habits:

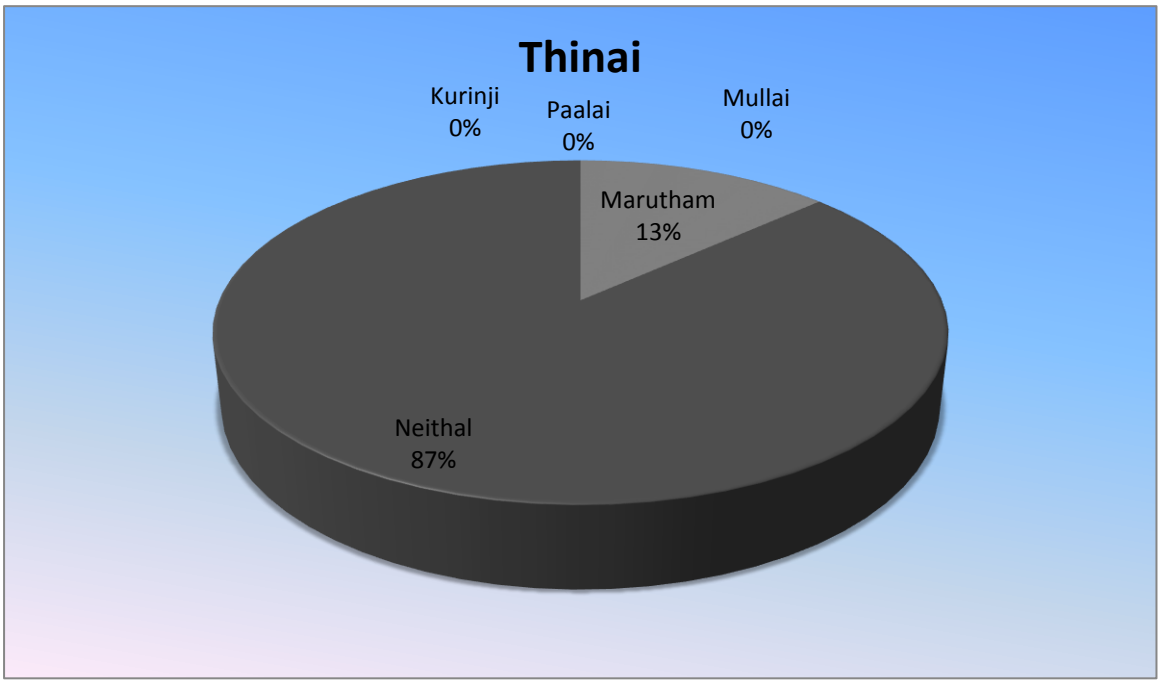
S.NO	Dietary habits	NO OF CASE	PERCENTAGE
1.	Vegetarian	3	10%
2.	Non-vegetarian	27	90%
Total		30	100%



Observation: In this study only 90% of Patients were Non Vegetarian.

6. Thinai reference:

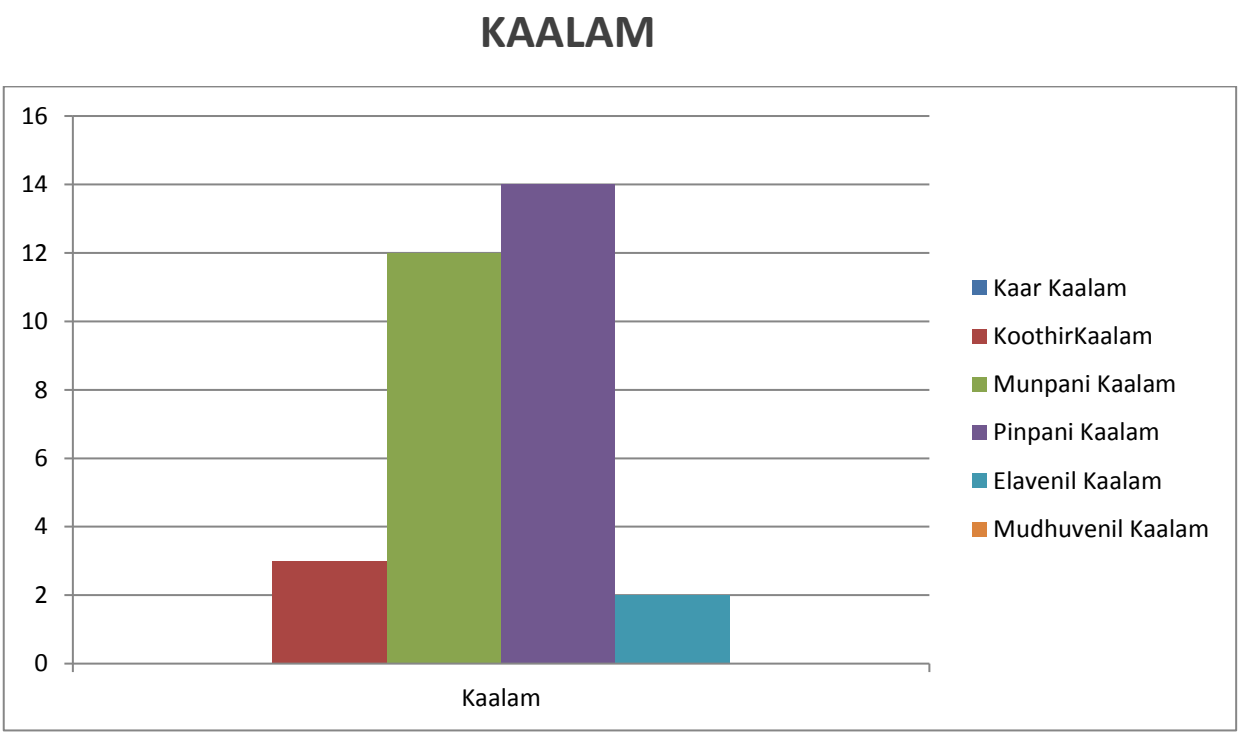
S.NO	THINAI	NO OF CASE	PERCENTAGE
1.	Kurinji (Hill Area)	0	0%
2.	Mullai (Forest Area)	0	0%
3.	Marutham (Fertile Land)	4	13.3%
4.	Neithal (Coastal Area)	26	86.6%
5.	Paalai (Desert Land)	0	0%
Total		30	100%



Observation: In this study 86.6% of the patients were from neithal, 13.3%% were from marutham.

7.KAALAM DISTRIBUTION:

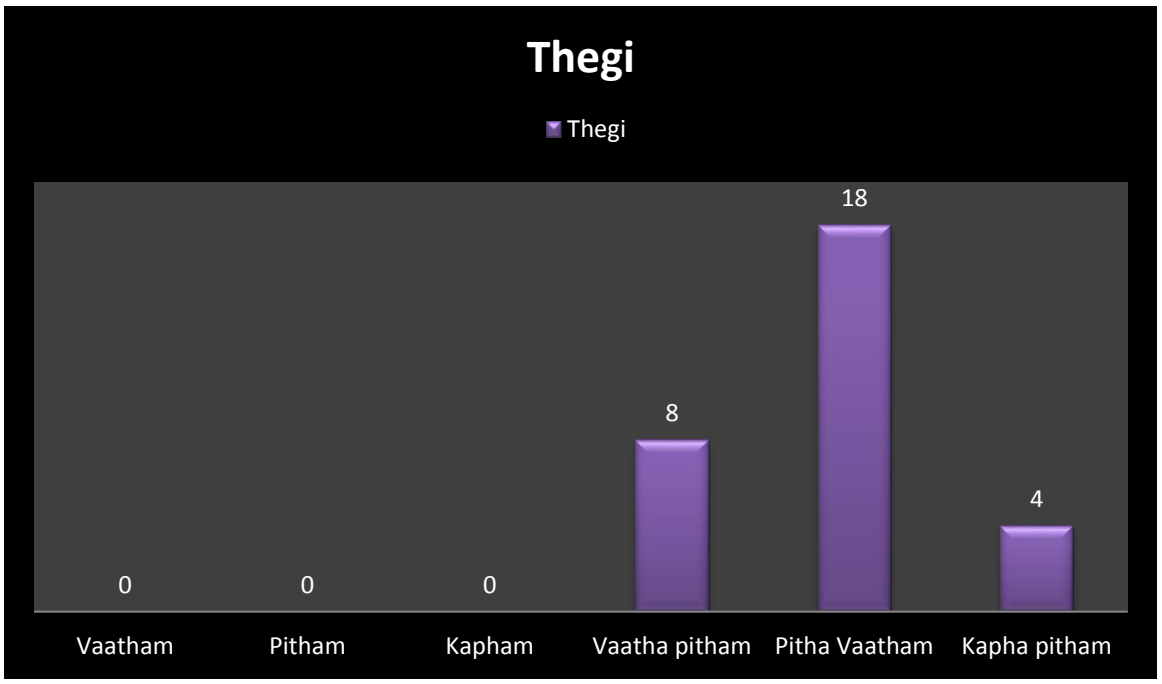
S.NO	KALAM	NO OF CASE	PERCENTAGE
1.	Kaar kaalam	0	0%
2.	Koothir kaalam	3	10%
3.	Munpani kaalam	12	40%
4.	Pinpani kaalam	14	46.6%
5.	Elavenil kaalam	1	3.3%
6.	Muthuvenil kaalam	0	0%
Total		30	100%



Observation: Among 30 patients, 46.6% of patients underwent treatment in Pinpani kaalam. 40%,10%, 6.6% of patients underwent treatment during munpani kaalam,koothir kaalam and Elavenil Kaalam respectively.

8. Yaakai Ilakkanam (Physical Constitution):

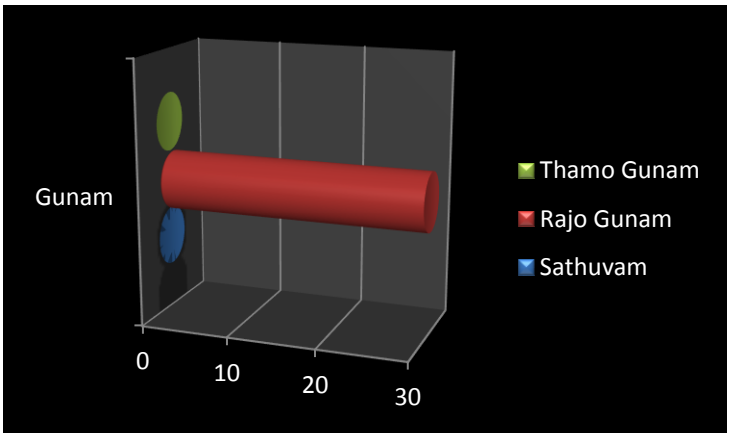
S.NO	YAKKAI ILAKKANAM	NO OF CASES	PERCENTAGE
1.	Vadha udal	0	0%
2.	Pitha udal	0	0%
3.	Kapha udal	0	0%
4.	Vaatha pitha udal	08	26.7%%
5.	Pitha vaatha Udal	18	60%
6.	Kapha pitha Udal	04	13.3%



Observation: All the patients (100%) belongs to Thontha Udal.In specifically 8 of the cases belongs to Vaatha pitham, 18 of the cases belongs to Pitha vaatham and $ cases belongs to Kapha pitham.

9. Gunam (Quality and Characters):

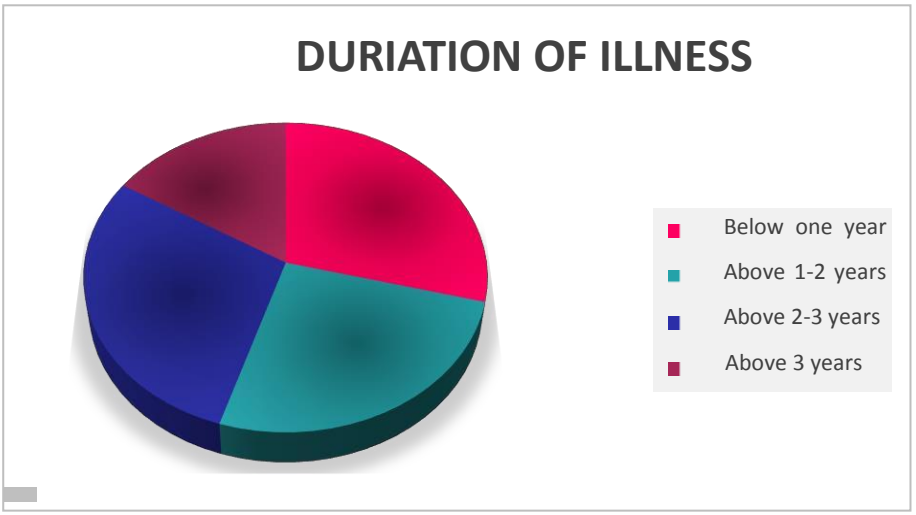
S.NO	GUNAM	NO OF CASE	PERCENTAGE
1.	Sathuva gunam	-	
2.	Rajo gunam	30	100%
3.	Thamo gunam	-	



Observation: All of the patients 30(100 %) possesed “Rajo Gunam”

10. Duration of Illness:

S.NO	DURIATION OF ILLNESS	NO OF CASE	PERCENTAGE
1.	Below one year	9	30%
2.	Above 1-2 years	8	26.6%
3.	Above 2-3 years	9	30%
4.	Above 3 years	5	16.6%



Observation: Among 30 patients 30% of cases were suffering for less than one year and another 30% of people were suffered for 2-3 year, 26.6% of cases suffered for 1-2year, 16.6% were suffered above 3 years.

11.Distribution of Mukkutram:

The derangements of Vaatham,Pitham and Kapham in Viyagula Unmaatham as follows,

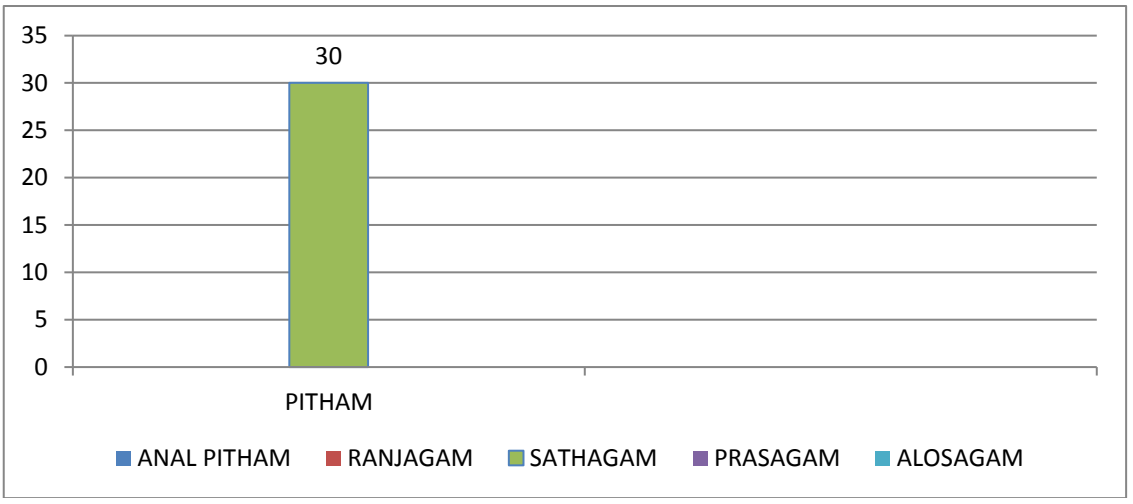
VATHAM:

S.NO	CLASSIFICATION OF VATHAM	NO OF CASE	PERCENTAGE
1.	Pranan	30	100%
2.	Abanan	10	33.3%
3.	Udhanan	0	0%
4.	Samanan	0	0%
5.	Viyanan	0	0%
6.	Naagan	30	100%
7.	Koorman	0	0%
8.	Kirukaran	0	0%
9.	Devathathan	0	0%
10.	Dananjeyan	0	0%

Observation: All of the 30 cases are affected by Praanan,Naagan.The Abaanan is affected in 33.3% of cases.

PITHAM:

S.NO	CLASSIFICATION OF PITHAM	NO OF CASE	PERCENTAGE
1.	Anal pitham	0	0%
2.	Ranjagam	0	0%
3.	Sadhagam	30	100%
4.	Prasagam	0	0%
5.	Alosagam	0	0%
Total		30	100%



Observation: Among all of the patients are affected by Saathaga pitham.

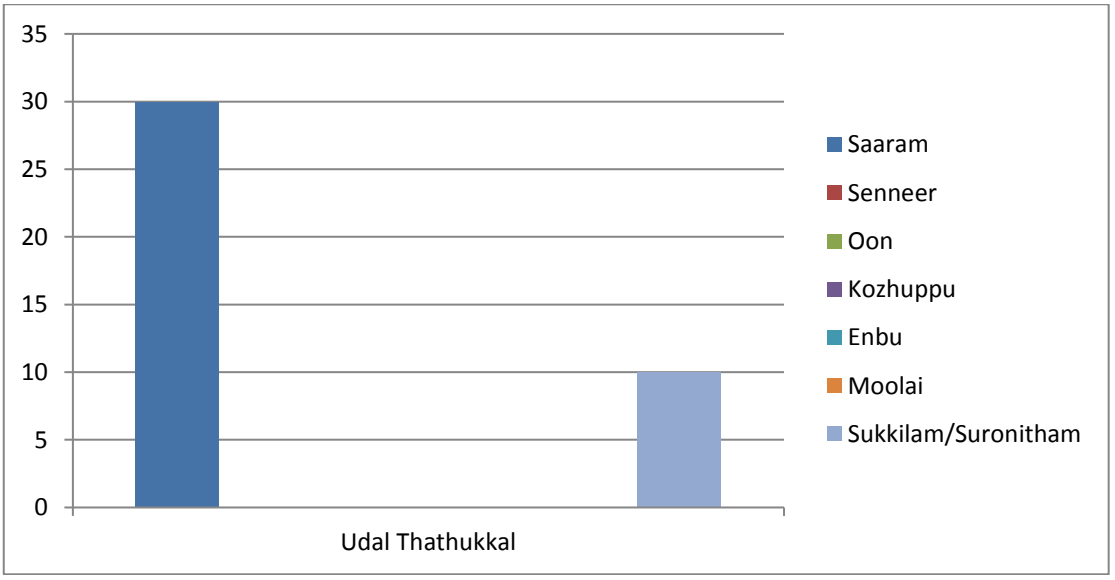
KAPHAM:

S.NO	CLASSIFICATION OF KAPHAM	NO OF CASES	PERCENTAGE
1.	Avalambagam	0	0%
2.	Kilethagam	0	0%
3.	Tharpagam	0	0%
4.	Pothagam	0	0%
5.	Santhigam	16	53.3%

Observation: Santhigam was affected in 53.3% of cases.

12. UDAL KATTUGAL:

S.NO	UDAL KATTUGAL	NO OF CASE	PERCENTAGE
1.	Saram	30	100%
2.	Seneer	0	0%
3.	Oon	0	0%
4.	Kozhupu	0	0
5.	Enbu	0	0
6.	Moolai	0	0
7.	Sukkilam/suronitham	10	33.3%

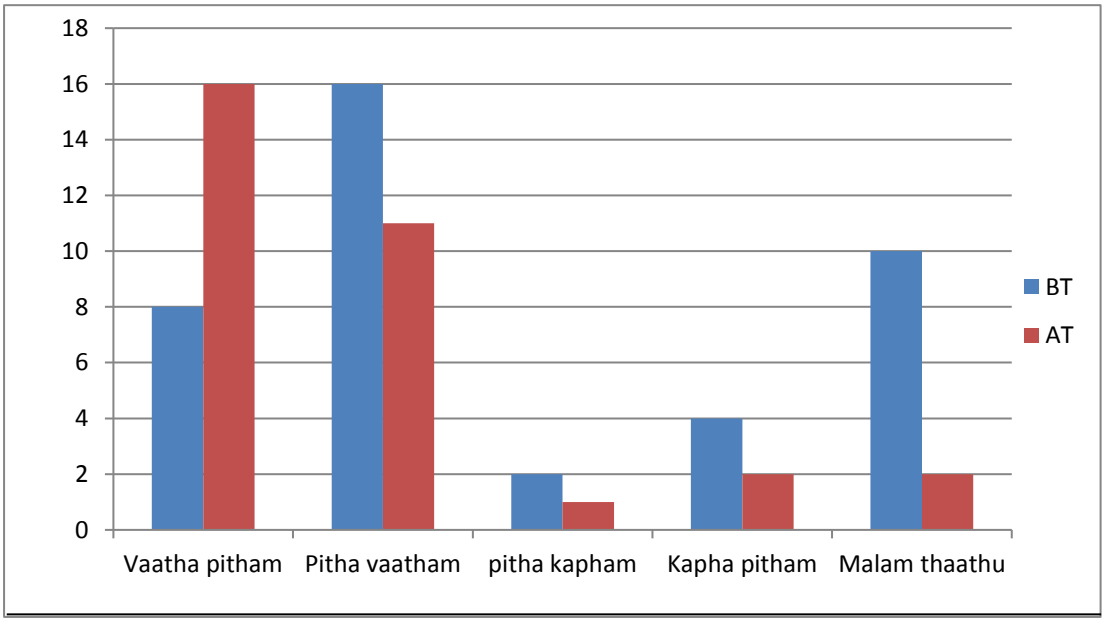


Observation: Among 30 patients, Saaram was affected in all the cases. Sukkilam/Suronitham was affected in 10 patients respectively.

13. EN VAGAI THERVUGAL:

S.NO	EN VAGAI THERVUKAL	NO OF CASE		PERCENTAGE (%)	
1.	NAADI:	BT	AT	BT	AT
	Vatha pitham	08	16	26.6%	53.3%
	Pitha vatham	16	11	53.3%	36.6%
	Pitha Kapham	02	01	6.6%	3.3%
	Kapha pitham	04	02	13.3%	6.6%
2.	Sparisam	0	0%	0%	0%
3.	Naa	0	0%	0%	0%
4.	Niram	0	0%	0%	0%
5.	Mozhi	0	0%	0%	0%
6.	Vizhi	0	0%	0%	0%
7.	Malam	10	02	33.3%	6.6%

8th examination discussed separately.



Observation:

Among 30 cases, 53.3% of cases had Pithavaatham naadi and 26.6%,6.6%,13.3% of cases had Vaatha pitham naadi,Pitha vaatham naadi,Pitha kapham and Kapha pitham naadi respectively while the beginning of study.Among the 30 cases The Malam is affected in 33.3% cases. After the study the among 30 cases 53.3% , 36.7% ,3.3% and 6.6% of cases had Vaatha pitham, Pitha vaatham, Pitha kapham and Kapha pitham respectively. 6.6% of cases had affected in the Malam thaathu.

14.NEER KURI & NEI KURI:

A. *NEERKURI:*

S.NO	TYPE OF TEST	NO OF CASE		PERCENTAGE	
		BT	AT	BT	AT
1.	Niram (pale yellow)	30	30	100%	100%

B.*NEI KURI*:

S.NO	TYPE OF TEST	NO OF CASE		PERCENTAGE	
		BT	AT	BT	AT
1.	Vatham (aravena neendathu)	08	14	26.7	46.7%
2.	Pitham (aazhi poi paraviyathu)	18	14	60%	46.7%
3.	Kapham (muththothu nindrathu)	04	02	13.3%	6.6%

Observation:

Before treatment all the 30 cases shown pale yellow colour in Neerkuri Examination.Among the 30 cases 18 patient`s Neikuri related with Pitham.And Vaatham and Kapham were related with 08 and 04 cases respectively.After treatment all the 30 cases shown pale yellow colour in Neerkuri Examination. Each 14 patients Neikuri related with Pitham and Vaatham . 2 of the cases related with Kapham.

INVESTIGATIONS BEFORE AND AFTER TREATMENT(HEMATOLOGY)

S. No	OP. No.	Age/Sex	Hb (gm/dl)		Total RBC count (million/cu.mm)		ESR (mm/hr)		Total WBC (cells/cu.mm)	
			BT	AT	BT	AT	BT	AT	BT	AT
1.	L7293	36/M	13.0	13.2	4.7	4.8	10/22	10/22	9400	9800
2.	J82877	24/F	11.4	11.2	4.1	4.0	10/20	10/20	9000	9000
3.	K22503	30/M	12.7	12.1	4.9	4.8	10/22	10/22	8400	9000
4.	K6216	44/M	16.1	16.0	6.2	5.9	2/4	2/4	5500	5200
5.	K44289	41/M	13.1	13.3	4.3	4.5	8/16	6/14	6100	7500
6.	L29758	23/F	10.2	10.4	4.0	4.1	16/32	16/32	6500	6300
7.	K42302	35/M	15.5	13.8	5.2	4.8	4/8	10/22	5300	9200
8.	L25184	34/M	13.1	13.2	4.9	4.9	4/10	4/8	8400	10200
9.	L36326	56/F	12.6	11.7	4.1	3.9	14/30	14/30	7200	7600
10.	L39314	45/F	15.1	14.1	5.0	5.2	2/4	4/8	5100	10000
11.	L13060	31/F	12.4	12.0	4.2	4.0	12/26	10/20	4500	4500
12.	L18963	21/M	13.7	13.8	5.1	5.2	4/8	4/8	4600	4800
13.	K33442	33/M	13.6	13.8	5.0	5.1	4/10	4/10	12100	12100
14.	K34254	46/F	14.5	14.1	4.9	4.8	6/14	6/12	7700	7800
15.	L18195	47/M	15.4	15.1	5.3	5.2	2/4	2/4	5500	5200
16.	L33967	47/F	13.9	13.4	5.1	5.9	6/12	6/12	9000	9000
17.	K90459	42/M	12.0	118	4.7	4.7	30/66	30/66	14000	11500
18.	K66988	59/F	13.9	14.5	5.0	5.1	4/12	4/8	8500	10300
19.	J39630	40/M	14.7	14.3	4.9	4.8	4/8	10/22	6100	6300
20.	L35741	30/F	15.2	13.7	5.1	4.5	2/4	4/8	6900	9300

21.	L33159	30/M	11.0	9.5	4.1	3.6	30/62	30/66	8400	7000
22.	L46576	40/M	13.9	14.2	4.4	4.7	2/4	16/32	10700	8000
23.	L3927	36/M	12.3	12.4	4.6	4.6	10/22	10/22	9100	8900
24.	K03174	40/M	15.0	14.4	5.2	5.0	16/34	16/32	8400	6600
25.	K15768	26/M	13.3	13.9	4.5	4.8	10/22	10/22	9200	5200
26.	K12113	30/F	14.3	14.2	4.8	4.8	4/8	4/8	9400	9000
27.	K07097	33/F	14.4	14.7	5.0	5.2	4/8	4/8	6800	7400
28.	K12855	25/F	12.4	12.8	4.0	4.2	20/42	22/42	8800	9000
29.	K13418	28/M	13.7	15.5	4.5	4.8	30/66	4/8	8600	10200
30.	K01901	35/M	13.7	13.8	4.7	4.2	30/62	30/66	5700	5200

INVESTIGATIONS BEFORE AND AFTER TREATMENT (LIVER FUNCTION TEST)

S.No	OP. No	Age/ Sex	SGOT		SGPT		Alkaline phosphatase	
			BT	AT	BT	AT	BT	AT
1.	L7293	36/M	20	16	14	11	72	60
2.	J82877	24/F	15	20	07	17	40	68
3.	K22503	30/M	07	10	10	12	88	93
4.	K6216	44/M	25	28	12	17	59	55
5.	K44289	41/M	12	20	05	25	64	66
6.	L29758	23/F	12	12	06	10	53	64
7.	K42302	35/M	33	30	49	45	50	67
8.	L25184	34/M	26	15	58	21	91	82
9.	L36326	56/F	16	19	17	27	53	51
10.	L39314	45/F	24	23	17	20	50	60
11.	L13060	31/F	22	25	16	16	74	70
12.	L18963	21/M	25	25	33	30	76	80
13.	K33442	33/M	16	30	19	25	57	80
14.	K34254	46/F	18	20	15	18	60	72
15.	L18195	47/M	17	20	15	17	78	82
16.	L33967	47/F	16	13	11	15	98	98
17.	K90459	42/M	18	28	39	24	77	80
18.	K66988	59/F	14	20	18	16	71	75
19.	J39630	40/M	16	17	11	13	60	72
20.	L35741	30/F	14	16	28	28	72	75

INVESTIGATIONS BEFORE AND AFTER TREATMENT (LIVER FUNCTION TEST)

S. No	OP. No	Age/Sex	SGOT		SGPT		Alkaline phosphatase	
			BT	AT	BT	AT	BT	AT
21.	L33159	30/M	15	15	30	11	53	49
22.	L46576	40/M	47	16	59	20	58	70
23.	L3927	36/M	13	15	07	11	104	105
24.	K03174	40/M	17	14	20	22	96	87
25.	K15768	26/M	14	21	08	19	71	73
26.	K12113	30/F	16	20	20	43	68	72
27.	K07097	33/F	14	18	20	34	60	57
28.	K12855	25/F	17	16	09	10	50	62
29.	K13418	28/M	22	32	14	28	74	85
30.	K01901	35/M	14	18	19	24	91	82

INVESTIGATIONS BEFORE AND AFTER TREATMENT (LIVER FUNCTION TEST)

S. No	OP. No	Age/Sex	Total bilirubin		Direct bilirubin		Indirect bilirubin	
			BT	AT	BT	AT	BT	AT
1.	L7293	36/M	0.5	0.5	0.1	0.2	0.3	0.3
2.	J82877	24/F	0.9	0.8	0.4	0.4	0.5	0.5
3.	K22503	30/M	0.4	0.4	0.2	0.1	0.2	0.3
4.	K6216	44/M	0.3	0.4	0.2	0.2	0.1	0.2
5.	K44289	41/M	0.3	0.4	0.2	0.2	0.1	0.2
6.	L29758	23/F	0.5	0.5	0.2	0.2	0.3	0.3
7.	K42302	35/M	0.5	0.6	0.1	0.1	0.3	0.4
8.	L25184	34/M	0.2	0.3	0.1	0.1	0.1	0.2
9.	L36326	56/F	0.6	0.4	0.2	0.1	0.4	0.3
10.	L39314	45/F	0.9	0.8	0.4	0.4	0.5	0.5
11.	L13060	31/F	0.3	0.4	0.2	0.1	0.1	0.2
12.	L18963	21/M	1.4	1.2	0.6	0.3	0.8	0.6
13.	K33442	33/M	1.7	1.6	0.5	0.4	1.2	0.7
14.	K34254	46/F	2.2	1.2	0.7	0.7	1.5	1.4
15.	L18195	47/M	0.6	0.6	0.3	0.2	0.3	0.2
16.	L33967	47/F	0.7	0.4	0.3	0.1	0.4	0.3
17.	K90459	42/M	0.3	0.4	0.1	0.2	0.2	0.3
18.	K66988	59/F	0.2	0.6	0.1	0.2	0.1	0.1
19.	J39630	40/M	0.5	0.6	0.2	0.1	0.3	0.4
20.	L35741	30/F	0.4	0.5	0.1	0.1	0.3	0.4

INVESTIGATIONS BEFORE AND AFTER TREATMENT (LIVER FUNCTION TEST)

S. No	OP. No	Age/Sex	Total bilirubin		Direct bilirubin		Indirect bilirubin	
			BT	AT	BT	AT	BT	AT
21.	L33159	30/M	0.7	1.0	0.3	0.4	0.4	0.6
22.	L46576	40/M	0.9	0.6	0.4	0.2	0.5	0.4
23.	L3927	36/M	0.8	0.8	0.3	0.3	0.5	0.5
24.	K03174	40/M	0.6	0.6	0.2	0.2	0.4	0.4
25.	K15768	26/M	0.7	0.7	0.3	0.3	0.4	0.4
26.	K12113	30/F	1.4	1.2	0.4	0.4	0.9	0.8
27.	K07097	33/F	0.7	0.8	0.3	0.3	0.4	0.5
28.	K12855	25/F	0.6	0.7	0.3	0.3	0.3	0.4
29.	K13418	28/M	0.5	0.6	0.1	0.1	0.4	0.3
30.	K01901	35/M	0.4	0.4	0.6	0.5	0.1	0.2

INVESTIGATIONS BEFORE AND AFTER TREATMENT (RENAL FUNCTION TEST)

S. No	OP. No	Age/Sex	Blood sugar Fasting		Blood sugar Post prandial		Urea		Creatinine	
			BT	AT	BT	AT	BT	AT	BT	AT
1.	L7293	36/M	90	88	124	115	18	15	0.8	1.2
2.	J82877	24/F	94	90	100	115	25	18	0.7	0.8
3.	K22503	30/M	100	95	148	135	35	30	0.8	0.8
4.	K6216	44/M	97	90	96	116	17	20	1.0	1.0
5.	K44289	41/M	93	81	83	93	11	14	0.9	0.8
6.	L29758	23/F	78	88	95	87	17	15	1.0	0.9
7.	K42302	35/M	105	85	120	110	21	24	1.0	0.8
8.	L25184	34/M	88	92	107	191	19	19	0.8	0.8
9.	L36326	56/F	98	104	104	169	14	13	0.7	0.8
10.	L39314	45/F	89	93	97	118	22	25	0.8	1.0
11.	L13060	31/F	94	85	102	110	14	23	0.8	1.0
12.	L18963	21/M	105	93	93	115	13	20	1.0	0.8
13.	K33442	33/M	107	105	129	127	19	19	0.8	0.7
14.	K34254	46/F	92	95	117	123	11	15	0.9	0.7
15.	L18195	47/M	115	105	117	127	12	15	1.1	0.9
16.	L33967	47/F	97	101	124	130	17	15	0.8	0.7
17.	K90459	42/M	97	104	139	124	20	19	0.9	0.6
18.	K66988	59/F	82	98	106	119	19	24	1.0	0.8
19.	J39630	40/M	88	93	109	125	15	23	1.2	0.9
20.	L35741	30/F	95	83	148	140	27	32	0.9	0.7

INVESTIGATIONS BEFORE AND AFTER TREATMENT (RENAL FUNCTION TEST)

S. No	OP. No	Age/Sex	blood sugar fasting		Blood sugar Post prandial		Urea		Creatinine	
			BT	AT	BT	AT	BT	AT	BT	AT
21.	L33159	30/M	94	107	98	102	15	16	0.8	0.9
22.	L46576	40/M	116	121	129	115	24	13	1.0	1.1
23.	L3927	36/M	95	86	96	114	13	18	0.8	0.9
24.	K03174	40/M	96	125	124	136	18	21	1.3	1.3
25.	K15768	26/M	95	104	137	104	12	12	0.8	0.9
26.	K12113	30/F	101	111	132	127	21	22	1.1	1.1
27.	K07097	33/F	95	105	128	116	19	16	1.2	1.1
28.	K12855	25/F	101	95	121	115	25	20	0.8	0.7
29.	K13418	28/M	83	90	118	123	39	25	1.1	0.8
30.	K01901	35/M	85	124	96	121	18	25	1.3	0.9

INVESTIGATIONS BEFORE AND AFTER TREATMENT (URINE ROUTINE TEST)

S. No	OP. No	Age /Sex	Urine sugar fasting		Urine sugar Postprandial		albumin		Deposits			
									Epithelial cells		Pus cells	
			BT	AT	BT	AT	BT	AT	BT	AT	BT	AT
1.	L7293	36/M	NIL	NIL	NIL	NIL	NIL	NIL	1-2	1-2	1-2	1-2
2.	J82877	24/F	NIL	NIL	NIL	NIL	NIL	NIL	1-2	1-2	2-4	1-2
3.	K22503	30/M	NIL	NIL	NIL	NIL	NIL	NIL	1-2	1-2	1-2	1-2
4.	K6216	44/M	NIL	NIL	NIL	NIL	NIL	NIL	1-2	1-2	1-2	1-2
5.	K44289	41/M	NIL	NIL	NIL	NIL	NIL	NIL	2-4	2-4	1-2	1-2
6.	L29758	23/F	NIL	NIL	NIL	NIL	NIL	NIL	3-5	6-8	3-5	2-4
7.	K42302	35/M	NIL	NIL	NIL	NIL	NIL	NIL	1-2	1-2	1-2	1-2
8.	L25184	34/M	NIL	NIL	NIL	NIL	NIL	NIL	2-4	1-2	3-5	1-2
9.	L36326	56/F	NIL	NIL	NIL	NIL	NIL	NIL	1-2	2-3	2-3	2-3
10.	L39314	45/F	NIL	NIL	NIL	NIL	NIL	NIL	1-2	1-2	1-2	1-2
11.	L13060	31/F	NIL	NIL	NIL	NIL	NIL	NIL	1-2	1-2	1-2	1-2
12.	L18963	21/M	NIL	NIL	NIL	NIL	NIL	NIL	1-2	1-2	1-3	2-4
13.	K33442	33/M	NIL	NIL	NIL	NIL	NIL	NIL	1-2	1-2	1-2	1-2
14.	K34254	46/F	NIL	NIL	NIL	NIL	NIL	NIL	1-2	1-3	3-5	1-3
15.	L18195	47/M	NIL	NIL	NIL	NIL	NIL	NIL	1-2	1-2	1-2	1-2
16.	L33967	47/F	NIL	NIL	NIL	NIL	NIL	NIL	1-2	1-3	1-2	1-3
17.	K90459	42/M	NIL	NIL	NIL	NIL	NIL	NIL	2-4	2-4	2-4	2-4
18.	K66988	59/F	NIL	NIL	NIL	NIL	NIL	NIL	2-3	2-4	2-4	1-2
19.	J39630	40/M	NIL	NIL	NIL	NIL	NIL	NIL	1-2	1-3	1-2	1-2
20.	L35741	30/F	NIL	NIL	NIL	NIL	NIL	NIL	1-2	1-2	4-6	3-4

INVESTIGATIONS BEFORE AND AFTER TREATMENT (URINE ROUTINE TEST)

S. No	OP. No	Age/Sex	Urine sugar fasting		Urine sugar Post prandial		albumin		Deposits			
									Epithelial cells		Pus cells	
			BT	AT	BT	AT	BT	AT	BT	AT	BT	AT
21.	L33159	30/M	NIL	NIL	NIL	NIL	NIL	NIL	3-5	1-2	1-2	1-2
22.	L46576	40/M	NIL	NIL	NIL	NIL	NIL	NIL	1-2	1-2	3-5	3-5
23.	L3927	36/M	NIL	NIL	NIL	NIL	NIL	NIL	1-2	2-4	1-2	2-4
24.	K03174	40/M	NIL	NIL	NIL	NIL	NIL	NIL	2-4	2-4	2-4	2-4
25.	K15768	26/M	NIL	NIL	NIL	NIL	NIL	NIL	1-2	1-3	2-3	4-6
26.	K12113	30/F	NIL	NIL	NIL	NIL	NIL	NIL	1-2	1-2	2-4	1-2
27.	K07097	33/F	NIL	NIL	NIL	NIL	NIL	NIL	1-2	1-2	1-2	2-4
28.	K12855	25/F	NIL	NIL	NIL	NIL	NIL	NIL	1-3	1-3	1-3	1-2
29.	K13418	28/M	NIL	NIL	NIL	NIL	NIL	NIL	2-4	1-2	2-4	1-2
30.	K01901	35/M	NIL	NIL	NIL	NIL	NIL	NIL	1-4	1-2	3-5	1-4

19. RESULTS AND STATISTICAL ANALYSIS:

All collected data were entered into MS Excel software using different columns as variables and rows as patients. SPSS software was used to perform statistical analysis. Basic descriptive statistics include frequency distributions and cross-tabulations were performed. The quantity variables were expressed as Mean ± Standard Deviation and qualitative data as percentage. A probability value of <0.05 was considered to indicate as statistical significance. Paired 't' test was performed for determining the significance between before and after treatment.

21.Observation of Trial Medicine before and after treatment (Based on BECK DEPRESSION SCALE)

As per the BECK Depression Inventory Scale the score is calculated before and after treatment and categorized into Good, Moderate and Mild Improvement.

Level	**Grade**
Normal	Grade 0 (1-10)
Mild Mood Disturbance	Grade 1 (11-16)
Borderline Clinical Depression	Grade 2 (17-20)
Moderate Level Depression	Grade 3 (21-30)
Severe Level Depression	Grade 4 (31-40)

Before Treatment	**After Treatment**	**Improvement**
Grade 3	Grade 0	Good
Grade 3	Grade 1	Moderate
Grade 3	Grade 2	Mild
Grade 2	Grade 0	Moderate
Grade 2	Grade 1	Mild

S.NO	OP. NO	AGE/ SEX	BT (**Score**)	AT (**Score**)	RESULTS
1.	L7293	36/M	22	12	MODERATE
2.	J82877	24/F	22	8	GOOD
3.	K22503	30/M	26	6	GOOD
4.	K6216	44/M	20	12	MODERATE
5.	K44289	41/M	22	6	GOOD
6.	L29758	23/F	22	6	GOOD
7.	K42302	35/M	20	10	MODERATE
8.	L25184	34/M	18	4	MODERATE
9.	L36326	56/F	22	6	GOOD
10.	L39314	45/F	22	8	GOOD
11.	L13060	31/F	20	8	MODERATE
12.	L18963	21/M	26	4	GOOD
13.	K33442	33/M	24	6	GOOD
14.	K34254	46/F	27	12	MODERATE
15.	L18195	47/M	24	16	MODERATE
16.	L33967	47/F	20	8	MODERATE
17.	K90459	42/M	24	4	GOOD
18.	K66988	59/F	21	8	GOOD
19.	J39630	40/M	20	4	MODERATE
20.	L35741	30/F	22	16	MODERATE
21.	L33159	30/M	20	8	MODERATE
22.	L46576	40/M	21	7	GOOD
23.	L3927	36/M	24	6	GOOD
24.	K03174	40/M	22	10	GOOD
25.	K15768	26/M	23	11	MODERATE
26.	K12113	30/F	21	8	GOOD
27.	K07097	33/F	19	10	MODERATE
28.	K12855	25/F	20	6	MODERATE
29.	K13418	28/M	24	14	MODERATE
30.	K01901	35/M	26	13	MODERATE

Paired Sample Statistics (BECK Depression scale Score Before Treatment and After Treatment) :

Variable	Sample size	Before treatment	After Treatment	t Value	p Value
Mean±SEM	30	22.13±1.02	8.57±1.53	t = 7.374	p <0.0001

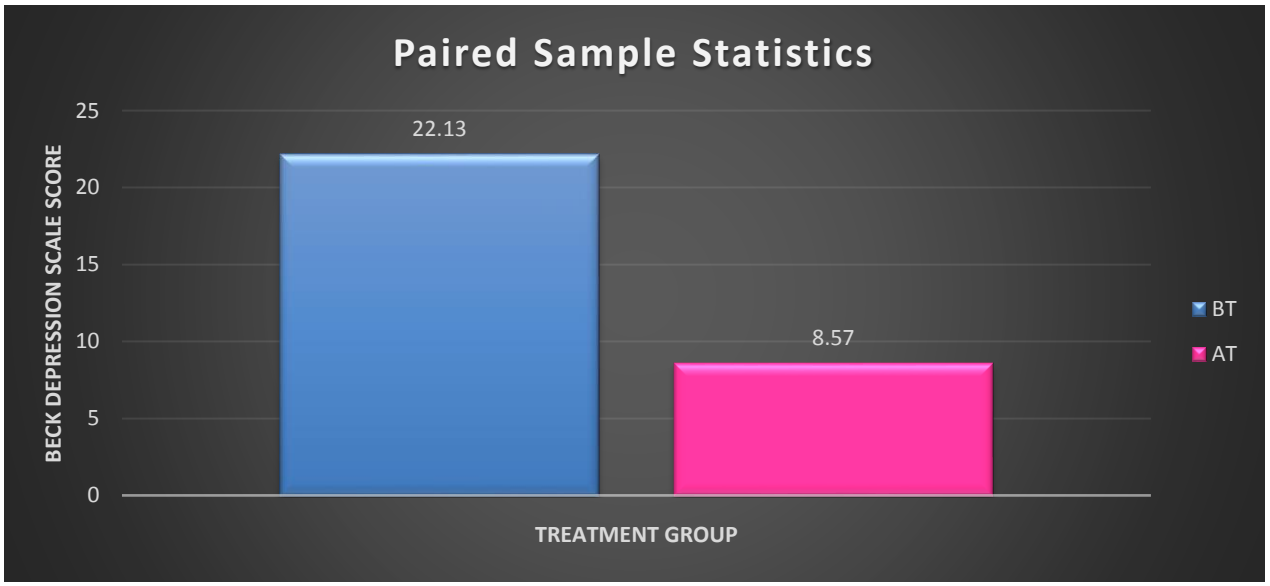


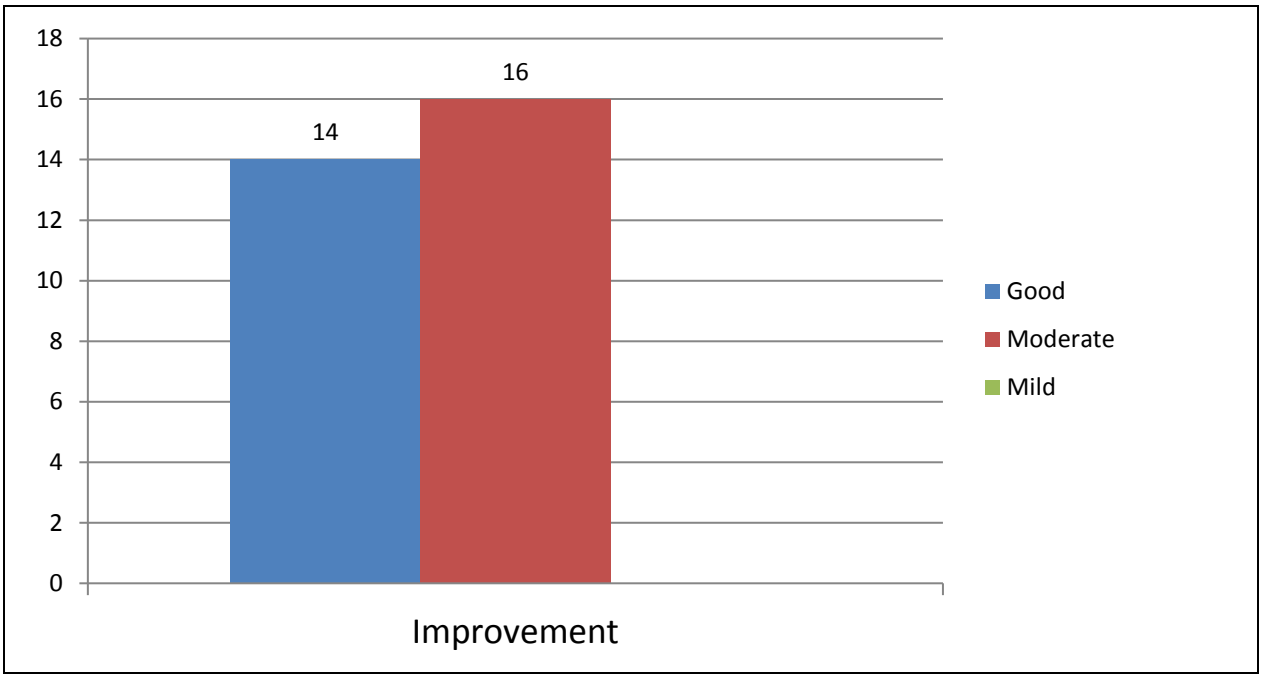
Figure .Paired Sample Statistics

Inference:

The mean ± SEM of BECK Depression scale Score at before and after treatment were 22.13±1.02 and 8.57±1.53 respectively which is statistically extreamly significant (t = 7.374, p <0.0001).

BECK DEPRESSION SCALE SCORING

S.NO	RESULTS	NO OF CASES	PERCENTAGE
1.	Good improvement	14	46.7%
2.	Moderate improvement	16	53.3%
3.	Mild improvement	00	0%



DISCUSSION

The Depression is one of the most important psychological problem more common among the population. Majority of them are not seeking the help to proper health care providers due to social stigma in related with psychological illness. Large numbers of patients perceive even the natural physiological function as abnormal. The Depression is rampant among the Indian population and leads to large number of physical and psychological symptoms. Majority of these individuals visit self-claimed psychiatrist and traditional faith healers. The contact with these health providers not only strengthen their misconception and false beliefs, but also compel the patients to pay huge cost of investigations and drugs which are not only non-effective but also hazardous. This may lead them as a patient in physically and mentally. In general practice, most of focus the physicians they attending their patients may missed the underlying psychiatric problems. Hence these kinds of patients get more worsened with their problems and become a mentally affected patient.

The trial drugs were prepared in *Gunapadam* lab of National Institute of Siddha after the authentication of the raw drugs by Assistant professor of Medicinal botany NIS, Chennai. The trial drug was prepared by Standard Operating Procedure as mentioned in the Protocol.

The Bio chemical analysis was done at the biochemistry lab of NIS and the results were documented.The Bio-chemical analysis of *VENPOOSANI KIRUTHAM* had shown presence of chloride,Carbonate,Magnesium,Ammonium,Aluminium,Starch,Lead,Iron,Zinc,Alkaloids.. The clinical study was conducted with a well-defined protocol and a proper proforma after the approval of Institutional Ethical Committee. For this dissertation study, 30 patients were selected and patients were treated in the OP Department of *Sirappu Maruthuvam*, in Ayothidoss Pandithar Hospital - National Institute of Siddha, Tambaram Sanatorium, Chennai –600 047.

Based on various criteria, the data were collected and tabulated. The criteria were family history, age distribution, occupation, dietary habits and incidence of the disease with reference to *thinai*, seasonal variation, clinical manifestations and assessment of the improvement in the prognosis of the disease with the trial drug.

In Siddha System, it is necessary to bring the vitiated humors to equilibrium. Hence before the treatment *Agasthiyar kuzhambu* with *Inji charu* (*Zingiber officinale*) was given

for *Viresanam* (Purgation) in the early morning to normalize the vitiated humors. During the treatment, the patients were advised to follow *pathiyam* (Dietary regimen).

Internal Drug : *Venpoosani Kirutham*- 16ml two times per day with Sugar

External Drug : *Seeraga Thylam* for oil bath 2 times per week

Duration of Drug : 48 days

30 patients were enrolled for this study, among 30 patients, age group 20 to 30 years were in number 10 (33.3%), patients between 31 to 40 were in number 11 (36.7 %), patients between 41 to 50 years were in number 7 (23.3 %), patients between 51 to 60 years were in number 2 (6.6%).

Viyakula unmatham commonly appears at young and middle age. In this present study, considerable numbers of patients were reported (11 patients) between the age of 31-40 years among study sample.

Among the 30 patients, male cases were reported in number 18(60%%) and female cases were reported in number 12(40%%). Usually the studies carried out on depression, proves that female were affected more than male. But the study revealed that, the occurrence more in male than the female due to social stigma and lack of awareness on mental health and cultural practice in the society.

The majority of patients in this study were common workers 15 (50 %), homemakers 7(23.3%%), unemployed 4(13.3%) and students 4(13.3%). Inference of this study shows that, in current scenario employed people are highly exposed to stress often, nwhich is one of the root cause of depressive disorders.

The most of patients in this study were Non-vegetarian 27 (90%) remaining 3 (10%) patients were vegetarian. Inference of this study, shows that people who are consuming high non-vegetarian diet, gets aggressive behaviour which may leads to psychiatric disorders.

In this present study shows, considerable numbers of patients were reported from *neithal* (26 patients), *marutham* (4 patients).

Highest number of patients 14 (46.6%) were studied during *Pinpani Kaalam,* 12 patients (40%) underwent treatment during *Munpani Kaalam*, 3 patients (10%) underwent treatment during *Koothir kaalam* and 2 patients underwent treatment during *Ilavenil kaalam*.

Most of patients 9(30%) were suffering less than one year. Another 9 cases were suffered above 2-3 years duration. Hence, 8 cases were suffered above 1-2 years and 5 cases

were suffered above 3 years.

Laboratory investigations were done for all the cases before and after treatment. There were no variations in hepatic, renal and other parameters.

All the patients received only trial medicines (Internally & Externally). This trial medicine shown results as 14 patients(46.7%)got good improvement and
16 patients(53.3%) got moderate improvement.

The outcome of this study was clinically observed by Beck Depression Scale Score, which showed encouraging results of good improvement in 14 patients (46.7%), moderate improvement in 16 patients (53.3%).

In this study, no adverse events were observed during the course of the treatment. After the study period, all the patients were advised to attend Out Patient Department of *Sirappu Maruthuvam* at NIS for further follow-up of 2 months.

SUMMARY

The disease *Viyakula unmatham* was taken for the clinical study with *Venpoosani Kirutham* as internal medicine and *Seeraga Thylam* for external application to take oil bath twice a week, for the clinical study, 30 cases were selected based on the approved protocol.

The raw drugs were authenticated by the competent authority Medicinal Botany and Gunapadam dept, Botanical Authentication Certificate no: NISMB3612019 .

This study has been approved by IEC of NIS [Date of IEC Approval& its number: NIS/13-IEC/201701.05/22.11.2017]. The study is safely executed on patients and there were no adverse drug reactions noted during the study period and further registered Clinical Trail Registry of India [REG. NO. CTRI/2018/04/013421].

The results were observed by Beck Depression Scale score. Among the 30 cases 46.7% cases had shown good improvement 53.3% cases had shown moderate improvement. The study results have revealed that 90% of the patients showed more than 50% improvement.

CONCLUSION

The present clinical study confirmed the efficacy of the trial drug *Venpoosani Kirutham* (internal medicine) and *Seeraga Thylam*(external medicine) which is a Siddha poly herbal formulation. It was found to be efficacious in *Viyakula unmatham* patients in reducing clinical symptoms like depressive mood, loss of sleep and appetite, weight loss, lack of concentration, anhedonia, suicidal thoughts etc. The outcome of Beck Depression Scale score shows significant reduction of the condition between before and after treatment. The outcome shows there is 46.7% of cases had shown good improvement and the rest 53.3% of cases had shown moderate improvement.

The clinical trial conducted in selected patients was satisfactory and the results were encouraging. However, a study with large number of patients is required to find out the ideal dose response.

The costs of the trial medicines are comparatively low. The trail medicines are cost effective.

From the above results, the trial drugs "*Venpoosani kirutham*" (Internal Medicine) and "*Seeraga Thylam*" (External Medicine) are found to be efficacious in the treatment of *Viyakula unmatham.*

NATIONAL INSTITUTE OF SIDDHA

AYOTHIDOSS PANDITHAR HOSPITAL, CHENNAI – 600 047.

DEPARTMENT OF SIRAPPU MARUTHUVAM

CLINICAL STUDY OF SIDDHA DRUGS VENPOOSANI KIRUTHAM (INTERNAL), SEERAGA THYLAM (EXTERNAL) IN THE TREATMENT OF VIYAGULA UNMAATHAM (DEPRESSION)

.

Principal Investigator : Dr.K.Prabakar

SCREENING & SELECTION PROFORMA

1. SERIAL NO: …….. **2. OP /IP NO: ……**
3. NAME: …… **4. AGE/GENDER: …….....**
5. OCCUPATION: ……. **6. INCOME: ……..**

INCLUSION CRITERIA

Age: between 20 years and 60 years	Yes/No
Sex: Both male and female	Yes/No
Depressed mood	Yes/No
Reduced level of interest	Yes/No
Considerable loss or gain of weight	Yes/No
Insomnia or hypersomnia	Yes/No
Psychomotor agitation or retardation	Yes/No
Fatigue	Yes/No
Thoughts of extreme guilt	Yes/No
Diminished ability to think or concentrate	Yes/No
Suicidal thoughts	Yes/No
Diabetes mellitus	Yes/No
Willing to participate in trial and signing consent by fulfilling the conditions of proforma	Yes/No
Willing to give blood sample for analysis for laboratory investigations	Yes/No

EXCLUSION CITERIA:

Pregnancy and lactation	Yes/No
Diabetes mellitus	Yes/No
Psychosomatic disorders	Yes/No
Cardiac disease	Yes/No
Any other serious systemic illness	Yes/No

TRAIL

YES ☐ NO ☐

If Yes, OPD ☐ IPD ☐

Serial NO: ☐

Date:

Station:

Signature of the Investigator:

Signature of the Lecturer: **Signature of the HOD**

NATIONAL INSTITUTE OF SIDDHA

AYOTHIDOSS PANDITHAR HOSPITAL, CHENNAI – 600 047.

DEPARTMENT OF SIREAPPU MARUTHUVAM

CLINICAL STUDY OF SIDDHA DRUGS VENPOOSANI KIRUTHAM (INTERNAL), *SEERAGA THYLAM* (EXTERNAL) IN THE TREATMENT OF *VIYAGULA UNMAATHAM* (DEPRESSION)

Principal Investigator : Dr.K.PRABAKAR

FORM II-A – HISTORY TAKING PROFORMA

STUDY NO: **OP / IP NO:**
NAME: **AGE / GENDER:**
ADDRESS: **CONTACT NO :**
RELIGION : H / C / M / O.
OCCUPATION: **INCOME:**
MARITAL STATUS : 1. Married 2. Unmarried
DATE OF INTIAL ASSESSMENT:
COMPLAINTS & DURATION:

PERSONAL HISTORY:

PERSONAL HABITS	YES	NO	IF YES SPECIFY DURATION	AMOUNT/Quantity
Smoking				
Tobacco Chewing				
Alcohol				
Narcotic Drug Addiction				

HISTORY OF PREVIOUS ILLNESS AND TREATMENT TAKEN:

FAMILY HISTORY:
Whether this problem runs in family? 1. Yes 2. No
If yes, mention the relationship of affected person(s) 1._____

2._____

DIETARY STYLE: 1. Vegetarian 2. Non-vegetarian

MENSTURAL AND OBSTETRIC HISTORY:

FORM II B

GENERAL EXAMINATION:

1. Body weight [Kg]	:		
2. Height [cms]	:		
3. Body Temperature [F]	:		
4. Blood Pressure (mm/Hg)	:		
5. Pulse Rate /min.	:		
6. Heart Rate / min.	:		
7. Respiratory Rate /min.	:		
		Yes	**No**
8. Pallor	:	☐	☐
9. Jaundice	:	☐	☐
10. Clubbing	:	☐	☐
11. Cyanosis	:	☐	☐
12. Pedal Oedema	:	☐	☐
13. Lymphadenopathy	:	☐	☐
14. Jugular venous pulsation	:	☐	☐

SYSTEMIC EXAMINATION

Cardiovascular system	**:**
Respiratory system	**:**
Gastro-intestinal system	**:**
Central Nervous system	**:**
Urogenital system	**:**
Endocrine system	**:**

SIDDHA SYSTEM OF EXAMINATION

1. THEGI (BODY CONSTITUTION):

1. Vatha udal ☐
2. Pitha udal ☐
3. Kaba udal ☐
4. Thontha udal ☐

2. NILAM (LAND WHERE THE PATIENT LIVED MOST):

1. Kurinji (Hilly terrain) ☐
2. Mullai (Forest range) ☐
3. Marutham (Plains) ☐
4. Neithal (Coastal belt) ☐
5. Paalai (Aridregion) ☐

3. KAALAM:

1. Kaar kaalam (Aavani-Purattasi) ☐

2. Koothir kaalam (Ippasi-Kaarthigai)
3. Munpani kaalam (Maargazhi-Thai)
4. Pinpani kaalam (Maasi-Panguni)
5. Ilavenil kaalam (Chithirai-Vaigasi)
6. Muthuvenil kaalam (Aani-Aadi)

4. GUNAM:

1. Sathuvam
2. Rasatham
3. Thamasam

5. PORIPULANGAL (SENSORY ORGANS):

	Before treatment	**After treatment**
Mei (Skin)	Normal / Affected	Normal / Affected
Vai (Tongue)	Normal / Affected	Normal / Affected
Kann (Eye)	Normal / Affected	Normal / Affected
Mooku (Nose)	Normal / Affected	Normal / Affected
Sevi (Ear)	Normal / Affected	Normal / Affected

6.KANMENDRIYAM (MOTOR ORGANS) :

	Before treatment	**After treatment**
Kai (Upper limb)	Normal /Affected	Normal /Affected
Kaal (Lower limb)	Normal /Affected	Normal /Affected
Vai (Oral cavity)	Normal /Affected	Normal /Affected
Eruvai (Anal region)	Normal /Affected	Normal /Affected
Karuvai (Uro-Genital region)	Normal /Affected	Normal /Affected

7. KOSANGAL (SHEATH):

	Before treatment	**After treatment**
Annamaya kosam	Normal /Affected	Normal /Affected
Pranamaya kosam	Normal /Affected	Normal /Affected
Manomaya kosam	Normal /Affected	Normal /Affected
Vignanamaya kosam	Normal /Affected	Normal /Affected
Ananthamaya kosam	Normal /Affected	Normal /Affected

8.

SEVEN UDAL THAATHUKKAL (SEVEN SOMATIC COMPONENTS)

	Before treatment	After treatment
Saaram	Normal /Affected	Normal /Affected
Senneer	Normal /Affected	Normal /Affected
Oon	Normal /Affected	Normal /Affected
Kozhuppu	Normal /Affected	Normal /Affected
Enbu	Normal /Affected	Normal /Affected
Moolai	Normal /Affected	Normal /Affected
Sukkilam / Suronitham	Normal /Affected	Normal /Affected

9. UYIR THAATHUKKAL: **[THREE HUMORS] (VALI/ AZHAL/ IYYAM)**

A) VALI

	0th day	**8th day**	**15th day**	**22nd day**	**29th day**	**36th day**	**43rd day**	**49th day**
Praanan								
Abaanan								
Samaanan								
Udhaanan								
Viyaanan								
Naagan								
Koorman								
Kirukaran								
Devathathan								
Dhananjeyan								

B) AZHAL

	0th day	8th day	15th day	22nd day	29th day	36th day	43rd day	49th day
Analakam								
Ranjakam								
Saathakam								
Prasakam								
Aalosakam								

C) IYYAM

	0th day	8th day	15th day	22nd day	29th day	36th day	43rd day	49th day
Avalambagam								
Kilethagam								
Pothagam								
Tharpagam								
Santhigam								

10. ENVAGAI THERVU: [EIGHT TYPES OF EXAMINATION]

I. NAADI: [PULSE PERCEPTION]

NAADI	0th day	8th day	15th day	22nd day	29th day	36th day	43rd day	49th day

II. SPARISAM: [PALPATION]

Day	SPARISAM
0th day	
8th day	
15th day	
22nd day	
29th day	
36th day	
43rd day	
49th day	

III. NAA: [TONGUE]

NAA	0th day	8th day	15th day	22nd day	29th day	36th day	43rd day	49th day

IV. NIRAM: [COMPLEXION]

1. Vadham
2. Pitham
3. Kabam

V. MOZHI: [VOICE]

1. High Pitched
2. Low Pitched
3. Medium Pitched

VI.VIZHI: [EYES]

VIZHI	0th day	8th day	15thday	22ndday	29thday	36th day	43rdday	49thday

VII. MALAM: [BOWEL HABITS / STOOLS]

	Before treatment	After treatment
Niram		
Irugal		
Ilagal		
Others		

VIII. MOOTHIRAM [URINE EXAMINATION]

NEERKKURI:

Neerkkuri	Before treatment	After treatment
Niram		
Manam		
Edai		
Nurai		
Enjal		

NEIKKURI:

Neikkuri	Before treatment	After treatment
Aravana needathu/ Snake like pattern		
Azhipol paraviyathu Annular/Ringedpattern		
Muththothu ninrathu Pearlbeadepattern		
Other patterns		

Date:

Station:

Signature of the Investigator:

Signature of the Lecturer: **Signature of the HOD**

NATIONAL INSTITUTE OF SIDDHA

AYOTHIDOSS PANDITHAR HOSPITAL, CHENNAI – 600 047.

DEPARTMENT OF SIRAPPU MARUTHUVAM

A CLINICAL STUDY OF SIDDHA DRUG **VENPOOSANI KIRUTHAM(INTERNAL) AND SEERAGA THYLAM (EXTERNAL) FOR THE TREATMENT OF VIYAGULA UNMAATHAM.**

Principal Investigator : Dr.K.PRABAKAR

1. SERIAL NO: **2. OP /IP NO:**
3. NAME: **4. AGE/GENDER:**

FORM-III - LABORATORY INVESTIGATIONS

BLOOD INVESTIGATIONS		**NORMAL VALUES**	**BEFORE TMT (WITH DATE)**	**AFTER TMT (WITH DATE)**
HB(gm/dl)		**M:12-15** **W:11.5-14**		
T.WBC (cells/cu.mm)		**4000-11000**		
DIFFERENTIAL	**Polymorphs**	**40-75**		

COUNT (%)	**Lymphocytes**	**20-40**		
	Monocytes	**2-10**		
	Eosinophils	**1-6**		
	Basophils	**0-1**		
T.RBC(million cells/cu.mm)		**M:4.0-5.5** **W:3.5-4.5**		
ESR(mm/hour)	**½ hr.**	**M:6-12** **W:7-18**		
	1 hr.			

Blood Investigations		**Normal Values**	**Before TMT(WITH DATE)**	**After TMT (WITH DATE)**
Blood glucose (mg/dl)	**Fasting**	**70-110**		
	PP	**80-140**		
	Random	**80-120**		
RFT (mg/dl)	**Blood urea**	**16-50**		
	Serum creatinine	**0.6-1.2**		
LFT (IU)	**Total bilirubin**	**0.2-1.2**		
	Direct bilirubin	**0.1-1.2**		
	Indirect bilirubin	**0.2-0.7**		
	SGOT	**0-40**		
	SGPT	**0-35**		

	Alkaline phosphatase	**80-290**		
RA FACTOR				
CRP				
ASO TITRE				

Urine investigation	Before Treatment(with Date)	After Treatment (With Date)
Neerkuri		
Niram		
Edai		
Manam		
Nurai		
Enjal		
Nei kuri		
Albumin		
Fasting sugar		
PP sugar		
Deposits		

Date:

Station:

Signature of the Investigator:

Signature of the Lecturer: **Signature of the HOD**

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DEPARTMENT OF SIRAPPU MARUTHUVAM

CLINICAL STUDY OF SIDDHA DRUG **VENPOOSANI KIRUTHAM (INTERNAL) AND SEERAGA THYLAM (EXTERNAL) FOR THE TREATMENT OF VIYAGULA UNMAATHAM.**

Principal Investigator : Dr.K.PRABAKAR

FORM –VI- DRUG COMPLIANCE FORM

SERIAL NO:

NAME:

DRUG NAME:

On 1st day-Date: Drugs issued: (gms) Drugs returned: (gms)
On 8th day-Date: Drugs issued: (gms) Drugs returned: (gms)
On 15th day-Date: Drugs issued: (gms) Drugs returned: (gms)
On 22th day-Date: Drugs issued: (gms) Drugs returned: (gms)
On 29th day-Date: Drugs issued: (gms) Drugs returned: (gms)
On 36th day-Date: Drugs issued: (gms) Drugs returned: (gms)
On 43th day-Date: Drugs issued: (gms) Drugs returned: (gms)

Day	Date	Morning	Evening	Day	Date	Morning	Evening
Day 1				Day25			
Day2				Day26			
Day3				Day27			
Day4				Day28			
Day5				Day29			
Day6				Day30			
Day7				Day31			
Day8				Day32			
Day9				Day33			
Day10				Day34			
Day11				Day35			
Day12				Day36			
Day13				Day37			
Day14				Day38			
Day15				Day39			
Day16				Day40			
Day17				Day41			
Day18				Day42			
Day19				Day43			
Day20				Day44			
Day21				Day45			
Day22				Day46			
Day23				Day47			
Day24				Day 48			

Date:
Station:
Signature of the Investigator:
Signature of the Lecturer: **Signature of the HOD**

NATIONAL INSTITUTE OF SIDDHA

AYOTHIDOSS PANDITHAR HOSPITAL, CHENNAI – 600 047.

DEPARTMENT OF SIRAPPU MARUTHUVAM

CLINICAL STUDY OF SIDDHA DRUGS VENPOOSANI KIRUTHAM(INTERNAL), SEERAGA THYLAM (EXTERNAL) IN THE TREATMENT OF VIYAGULA UNMAATHAM (DEPRESSION)

Principal Investigator : Dr.K.PRABAKAR

FORM V– PATIENT INFORMATION SHEET

Name of Principal Investigator: Dr.K.Prabakar

Guide: Dr.V.Mahalakshmi.MD (s),Ph.D

Name of the institute: National Institute of Siddha,
Tambaram Sanatorium, Chennai-47.

INFORMATION SHEET FOR PATIENTS PARTICIPATING IN THE CLINICAL TRIAL

I am **Dr.K.Prabakar** studying M.D (Siddha) at National Institute of Siddha, Tambaram Sanatorium doing a trial on ‘‘VIYAGULA UNMAATHAM(DEPRESSION). It is a most common psychological problem, occurring throughout the world. In this regard, I need to ask you few questions. I will maintain confidentiality of your comments and data obtained. There will be no risk of disclosing your identity and no physical, psychological or professional risk involved by taking part in this study. Taking part in this study is voluntary. No compensation will be paid to you for taking part in this study.

You can choose not to take part. You can choose not to answer a specific question. There is no specific benefit for you if you take part in the study. However, taking part in the study may be of benefit to the community, as it may help us to understand the problem of defaulters and potential solutions.

If you agree to be a participant in this study, you will be included in the study primarily by signing the consent form and then you will be given the internal medicine VENPOOSANI KIRUTHAM **(**Internal medicine),SEERAGA THAILAM (EXTERNAL MEDICINE) for 48 days . The information I collect in this study will remain between you and the principal investigator (myself). I will ask you few questions through a questionnaire. I will not write your name on this form. Your name won’t be mentioned in the lab investigation form instead a code will be used.

If you want to know more about this study before taking part, you can ask me all the questions you want or contact Dr.K.PRABAKAR, PG Scholar cum principal investigator of this study, National Institute of Siddha, Chennai-47. You can also contact the Member-secretary of Ethical committee, National Institute Siddha, Chennai 600047.

Tel.No: 91-44-22380789, for rights and participation in the study.

¾¸Åø ÀÊÅÕ

§¾°¢Â °¢ò¾ ÁÕòÐÅ ¿¢ÚÅÉõ, ¦°ý¨É 47

«§Â¡ò¾¢¾¡Š ÀñÊ¾÷ ÁÕòÐÅÁ¨É, ¦°ý¨É.

வியாகூல உன்மாதம் நோய்க்கான °¢ò¾ ÁÕóÐ¸Ç¢ø வெண்பூசணி கிருதம் (¯û ÁÕóÐ) ÁüÚõ சீரகத்தைலம் (¦ÅÇ¢ ÁÕóÐ) ÀÃ¢¸Ã¢ôÒò ¾¢È¨Éì ¸ñ¼È¢Ôõ ÁÕòÐÅ ¬öÅ¢ü¸¡É ¾¸Åø ÀÊÅÕ

Ó¾ý¨Á ¬Ã¡öî°¢Â¡Ç÷ ¦ÀÂ÷: ÁÕòÐÅ÷ **க.பிரபாகர்**

¿¢ÚÅÉò¾¢ý ¦ÀÂ÷ §¾°¢Â °¢ò¾ ÁÕòÐÅ ¿¢ÚÅÉõ,

¾¡õÀÃõ

°¡ÉðS¼¡Ã¢Âõ, ¦°ý¨É 47

§¾°¢Â °¢ò¾ ÁÕòÐÅ ¿¢ÚÅÉò¾¢ø Àð¼ §ÁüÀÊôÒ ÀÂ¢ýÚ ÅÕõ ¿¡ý **வியாகூல உன்மாதம்** §¿¡Â¢ø ÁÕòÐÅ ¬Ã¡öî°¢Â¢ø ®ÎÀðÎû§Çý.

-Ð ÀÃÅ**க்** ÜÊÂ §¿¡ö «øÄ. -ó¾ ¬Ã¡öî°¢ °õÀó¾Á¡¸ °¢Ä §¸ûÅ¢¸¨Ç §¸ð¸×õ, §¾¨ÅÂ¡É ¬öÅ¸ ÀÃ¢§°¡¾¨ÉìÌ ¾í¸¨Ç ¯ðÀÎò¾×õ ¯û§Çý.

-Ð °õÀó¾Á¡É ¾í¸ÇÐ «¨ÉòÐ Å¢ÅÃí¸Ùõ Ã¸°¢ÂÁ¡¸ ¨Åì¸ôÀÎõ ±É ¯Ú¾¢«Ç¢ì¸¢§Èý. -¾¢ø ÀÂ½ôÀÊ Ó¾Ä¢Â ±ó¾ ¯¾Å¢ò ¦¾¡¨¸Ôõ ÅÆí¸ô À¼ Á¡ð¼¡Ð.

-ó¾ ¬Ã¡öî°¢Â¢ý §À¡Ð ¯¼ÖìÌ §ÅÚ À¡¾¢ôÒ ²üÀÎõ Àð°ò¾¢ø §¾°¢Â °¢ò¾ ÁÕòÐÅÁ¨ÉÂ¢ø ¾ì¸ °¢¸¢î¨° «Ç¢ì¸ôÀÎõ.

-ó¾ ¬Ã¡öî°¢ìÌ ¾¡í¸û Å¢ÕôÀò¾¢ý §ÀÃ¢ø ¯ðÀÎõ Àð°ò¾¢ø ¯ûÁÕó¾¡¸ **வெண்பூசணி கிருதம்** (¯û ÁÕóÐ) 16 **மி.லி** 2 §Å¨Ç (¸¡¨Ä,Á¡¨Ä) ¯½×ìÌ **முன்** ÁüÚõ **சீரகத்தைலம்** (¦ÅÇ¢ ÁÕóÐ) 48 ¿¡ð¸û **பயன்படுத்த** §ÅñÎõ. ¦ÅÇ¢§¿¡Â¡Ç÷¸û 7 ¿¡ð¸Ùì Ì ´ÕÓ¨È ÁÕòÐÅÁ¨ÉìÌ ÅÃ§ÅñÎõ.

-ó¾ ¬Ã¡öî°¢Â¢ø §¿¡Â¢ÉÃ¡¸ §°÷ó¾ À¢ÈÌ ¯í¸Ùì Ì Å¢ÕôÀõ -ø¨Ä¦ÂÉ¢ø ±ô§À¡Ð §ÅñÎÁ¡É¡Öõ Å¢Ä¸¢ ¦¸¡ûÇÄ¡õ.

-ó¾ ¬Ã¡öî°¢ °õÀó¾Á¡¸ ÁüÈ Å¢ÀÃí¸ÙìÌõ §¿¡Â¢ý ¾ý¨Á ÀüÈ¢Ôõ Ó¾ý¨Á ¬Ã¡öî°¢Â¡ÇÃ¡É ÁÕòÐÅ÷ (Àð¼ §ÁüÀÊôÀ¡Ç÷ °¢ÈôÒ ÁÕòÐÅ Ð¨È) «Ï¸×õ. ¨¸§À°¢ ±ñ 9488101203.

§ÁÖõ -ó¾ ¬Ã¡öî°¢ìÌ IEC °¡ýÚ ¦ÀÈôÀðÎûÇÐ. -ó¾ ÁÕóÐ **வெண்பூசணி கிருதம்** (¯û ÁÕóÐ) ÁüÚõ **சீரகத்தைலம்** (¦ÅÇ¢ ÁÕóÐ) °¢ÈôÀ¡¸ «í¸£¸Ã¢ì¸ôÀð¼ °¢ò¾ ÁÕòÐÅ áÄ¢ø ÜÐôÀðÎûÇÐ. ²ü¸É§Å ¯À§Â¡¸ò¾¢ø ¯ûÇ -Ð §À¡ýÈ ÁÕóÐ -ÐÅ¨Ã §¿¡Â¡Ç¢¸Ç¢¼õ ±ó¾ Å¢¾ Àì¸ Å¢¨Ç×¸¨ÇÔõ ²üÀÎò¾Å¢ø¨Ä. §ÁÖõ ¯½× Ó¨ÈÂ¢ø ÁÕòÐÅÃ¡ø ÜÈôÀÎõ Àò¾¢Âõ ¸¡ìÌÁ¡Ú «È¢×Úò¾ôÀÎ¸¢ÈÐ.

NATIONAL INSTITUTE OF SIDDHA

AYOTHIDOSS PANDITHAR HOSPITAL, CHENNAI – 600 047.

DEPARTMENT OF SIRAPPU MARUTHUVAM

CLINICAL STUDY OF SIDDHA DRUGS VENPOOSANI KIRUTHAM(INTERNAL), SEERAGA THYLAM (EXTERNAL) IN THE TREATMENT OF VIYAGULA UNMAATHAM (DEPRESSION)

Principal Investigator : Dr.K.PRABAKAR

FORM-V – CONSENT FORM

"I have read the foregoing information, or it has been read to me. I have had the opportunity to ask questions about it and any questions I have asked have been answered to my satisfaction.

I consent voluntarily to participate as a participant in this study and understand that I have the right to withdraw from the study at any time without in any way it affecting my further medical care".

"I have received a copy of the information sheet/consent form".

Date:

Signature of the participant

In case of illiterate participant

"I have witnessed the accurate reading of the consent form to the potential participant, and the individual has had the opportunity to ask questions. I confirm individual has given consent freely."

Date:

Signature of a witness
(Selected by the participant bearing no connection with the survey team)

Left thumb Impression of the Participant

FORM -VI **´ôÒ¾ø ÀÊÅõ**

¬öÅ¡ÇÃ¡ø °¡ýÈÇ¢ì¸ôÀð¼Ð

¿¡Ý **வியாகூல உன்மாதம்** (ÁÉ «ØÒ¾õ) ±ýÛõ §¿¡Â¢ý ¬ö¨Åì ÌÈ¢ò¾ «¨ÉòÐ Å¢ÀÃí¸¨ÇÔõ §¿¡Â¡Ç¢ìÌô ÒÃ¢Ôõ Å¨¸Â¢ø ±ÎòÐ¨Ãò§¾ý ±É ¯Ú¾¢ÂÇ¢ì¸¢§ÈÝ.

§¾¾¢: **¨¸¦Â¡ôÀõ:**

Þ¼õ: **¦ÀÂ÷:**

§¿¡Â¡Ç¢Â¢ý ´ôÒ¾ø

±ýÉ¢¼õ Þó¾ ÁÕòÐÅ ¬öÅ¢ý ¸¡Ã½ò¨¾Ôõ, ÁÕó¾¢ý ¾ý¨Á ÁüÚõ ÁÕòÐÅ ÅÆ¢Ó¨È ÀüÈ¢Ôõ, ¦¾¡¼÷óÐ ±ÉÐ ¯¼ø ÞÂì¸ò¨¾ì ¸ñ¸¡½¢ì¸×õ, «¾¨ÉÔ À¡Ð¸¡ì¸×õ ÀÂýÀÎõ ÁÕòÐÅ ¬ö×ìÜ¼ ÀÃ¢§°¡¾¨É¸û ÀüÈ¢ ¾¢ÕÔ¾¢ «Ç¢ìÌõ Å¨¸Â¢ø ¬ö× ÁÕòÐÅÃ¡ø Å¢Çì¸¢ì ÜÈôÀð¼Ð.

¿¡Ý Þó¾ ÁÕòÐÅ ¬öÅ¢ý §À¡Ð, ±ô¦À¡ØÐ §ÅñÎÁ¡É¡Öõ Þó¾ ¬öÅ¢Ä¢ÕóÐ ±ý¨É Å¢ÎÅ¢òÐ ¦¸¡ûÙõ ¯Ã¢¨Á¨Âò ¦¾Ã¢ó¾¢Õì¸¢ý§ÈÝ.

¿¡Ý ±ýÛ¨¼Â Í¾ó¾¢ÃÁ¡¸ò §¾÷× ¦°öÔõ ¯Ã¢¨Á¨Âì ¦¸¡ñÎ **வியாகூல உன்மாதம்** (ÁÉ «ØÒ¾õ) §¿¡öì¸¡É **வெண்பூசணி கிருதம்** (¯û ÁÕóÐ) ÁüÚõ **சீரகத்தைலம்** (¦ÅÇ¢ ÁÕóÐ) ÁÕó¾¢ý ÀÃ¢¸Ã¢ôÒò ¾¢È¨Éì ¸ñ¼È¢Ôõ ÁÕòÐÅ ¬öÅ¢üÌ ±ý¨É ¯ðÀÎò¾ ´ôÒ¾ø «Ç¢ì¸¢§ÈÝ.

§¾¾¢: **¨¸¦Â¡ôÀõ:**

Þ¼õ: **¦ÀÂ÷:**

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Å¢Ã¢×¨ÃÂ¡Ç¡÷ ¨¸¦Â¡ôÀõ **Ð¨Èò¾¨ÄÅ÷ ¨¸¦Â¡ôÀõ:**

NATIONAL INSTITUTE OF SIDDHA

AYOTHIDOSS PANDITHAR HOSPITAL, CHENNAI – 600 047.

DEPARTMENT OF SIRAPPU MARUTHUVAM

.

CLINICAL STUDY OF SIDDHA DRUGS **VENPOOSANI KIRUTHAM (INTERNAL) AND SEERAGA THYLAM (EXTERNAL) FOR THE TREATMENT OF VIYAGULA UNMAATHAM (DEPRESSION)**.

Principal Investigator : Dr.K.PRABAKAR

FORM VII -A- WITHDRAWAL FORM

1. SERIAL NO OF THE CASE: ……

2. OP / IP NO: .....

3. NAME: ……

4.AGE: ……

5.GENDER:.....

6. DATE OF TRIAL COMMENCEMENT: ……...

7. DATE OF WITHDRAWAL FROM TRIAL: ……..

8. REASONS FOR WITHDRAWAL:

Long absence at reporting:	Yes/ No
Irregular treatment:	Yes/ No
Shift of locality:	Yes/No
Increase in severity of symptoms:	Yes/No
Development of severe adverse drug reactions:	Yes/No
Development of adverse event:	Yes/No

(If YES, give the details of adverse reaction in Form VII -B – Adverse Reaction Form / Pharmaco Vigilance Form)

Date:

Station:

Signature of the Investigator:

Signature of the Lecturer: **Signature of the HOD**

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Principal Investigator : Dr.K.PRABAKAR

FORM VII -B – ADVERSE REACTION FORM / PHARMACO VIGILANCE FORM

SERIAL NO:

OP/IP NO:

NAME: **AGE:** **GENDER:**

DATE OF TRIAL COMMENCEMENT:

DATE OF THE ADVERSE REACVTION OCCURS:

DESCRIPTION OF ADVERSE REACTION:

Date:

Station:

Signature of the Investigator:

Signature of the Lecturer: **Signature of the HOD**

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Principal Investigator : Dr.K.PRABAKAR

S°÷ì¸ ÜÊÂ ¯½×¸û:

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±ÖõÒÁ^¨ƒ,

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§¸¡Æ¢ì¸È¢, ¸ÕÅ¡Î,

ÒÇ¢ôÒ ¦À¡Õû¸û,

¾ì¸¡Ç¢,

ÒÇ¢ôÒ ¾Â¢÷ §Á¡÷,

°Ú¸¡ö,

¦Àñ§À¡¸õ, Ò¨¸Â¢¨Ä ,

¦ÅüÈ¢¨Ä,À¡ìÌ.